TECHNOLOGY DEPT.

NEW EQUIPMENT DIGEST

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October, 1951

Volume 16—Number 10

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DETROIT

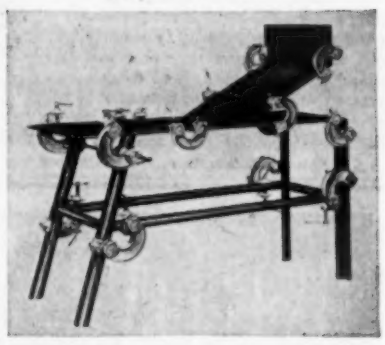
CHECK AND PASS ALONG

✓	NAME	See No.

Use Inquiry Slips—Pages 16 and 80

EQUIPMENT MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

WELDING CLAMPS
set and lock at any angle



Positioning and holding bars, pipes, tubes and plates for welding operations is made easy with Pro-Clamp welding clamps. Device consists of U-shaped frame fitted with pair of 360-degree rotating workholding clamps, one with flat and the other with V-form surfaces for gripping flat and round stock respectively. Each is provided with 180-degree protractor scale and positive locking device so clamps can be set at any angle from 0 to 180 degrees, then locked. Of all steel construction and plated to retard rusting, clamps are available in the following two sizes: model A, measuring 8 x 5½ in. and weighing 5½ lb with jaw capacity of 1 in.; and model B, measuring 11½ x 6½ in. and weighing 11½ lb with jaw capacity of 2½ in. Made by **Bernard Welding Equipment Co.**, Dept. D, 10222 Avenue N, Chicago 17, Ill.

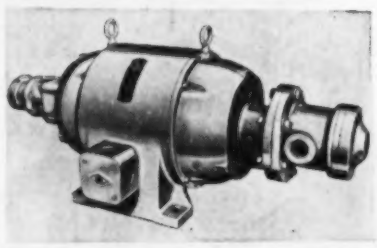
▲ For more details circle NED-7550 on enclosed inquiry slip ▲

PORTABLE PNEUMATIC GRINDER
safety device prevents overspeeding

Snagging, trimming, smoothing and other hand grinding operations are performed readily with this air-operated grinder. Integral motor governor maintains correct wheel speed, and overspeed safety coupling uncouples grinding wheel arbor from motor in case dirt, abuse, wear or maladjustment makes governor inoperative. Any one of four exhaust positions, spaced 90 degrees apart, can be selected by user to direct exhaust away from work or his own body. Other features are ample muffling, safe-carrying grip type handle, positive throttle valve, permanently lubricated arbor bearings and lightweight construction. This portable tool is available for 5, 6 or 8-in. wheels with respective speeds of 4500, 4100 and 3100 rpm. Made by **Ingersoll-Rand Co.**, Dept. F.P., 11 Broadway, New York 4, N. Y.

▲ For more details circle NED-7551 on enclosed inquiry slip ▲

HYDRAULIC PUMP MOTOR
for endbell mounting of all pumps



Adaptable to all makes of pumps, this hydraulic pump motor features standardized system for direct endbell mounting. Motors are supplied with machined endbell flanges made to fit pump mounting flange, thus insuring precision alignment. Installation costs are reduced and pump life increased by bolting two flanges together. Hydraulic pump motors are available with pump flange mount on one or both endbells in all standard horsepower and speed ratings. Several combinations of different sized pumps per motor are available in all types except totally enclosed fan cooled and explosionproof. These are offered in single pump mounts only. All motors are in accordance with standard NEMA dimensions. Made by **Reuland Electric Co.**, Mission & Fremont, Alhambra, Calif.

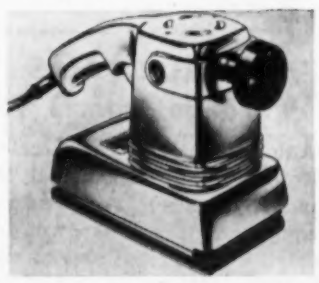
▲ For more details circle NED-7552 on enclosed inquiry slip ▲

STEEL HARDENERS
for use with welding torch

Emergency surface hardening of small steel tools, parts, edges, threads, dies and drills is accomplished with heat from welding torch by using Instant Hardner No. 1 and No. 2 compounds. Instant Hardner No. 2, while applied in same manner as No. 1, contains hard-facing particles which, when heated, fuse with parent metal to give combination of hardening and hard overlay. This action makes compound particularly effective for hardening plates against abrasive wear. Made by **Eutectic Welding Alloys Corp.**, Dept. P, 172nd St. & Northern Blvd., Flushing 58, N. Y.

▲ For more details circle NED-7553 on enclosed inquiry slip ▲

POWERED SANDER
uses standard sandpaper sheets



Highly adaptable to uses in furniture, millwork and metalworking shops and in factory maintenance, model 106 finishing sander uses 1/3 of standard 9 x 11-in. sandpaper sheets. Abrasive pad revolves in ¼-in. diameter orbit at 4000 rpm producing uniform smooth action with, against and across grains without scratch or mar. Machine weighs 6 lb, is balanced and measures 9½ x 4⅛ x 6½ in. in overall size. Large air intake located high on machine keeps heavy duty universal motor cool. Made by **Porter-Cable Machine Co.**, Dept. PR-1, 1710 N. Salina St., Syracuse 8, N. Y.

▲ For more details circle NED-7554 on enclosed inquiry slip ▲

INSULATION TESTER
equipped with two testing ranges

Accurate charting of insulation before it reaches minimum resistance value consistent with operating safety is provided by 0-100 megohms at 500 v dc of model 264 Vibrotest insulation tester. Second scale, 0-10,000 ohm, makes possible circuit continuity testing with same instrument. Pushbutton testing requires no cranking or leveling. Two binding posts are used for all tests. Unit is self-contained, weighing 18 lb with batteries and measuring 6⅛ x 7½ x 7¾ in. Made by **Associated Research, Inc.**, 3786 W. Belmont Ave., Chicago 18, Ill.

▲ For more details circle NED-7555 on enclosed inquiry slip ▲

FLUORESCENT LAMP BALLAST
designed for series operation

Type 96T12 fluorescent lamps for series operation are assured of rated lamp life and light output when used with No. 254-511 series-sequence ballasts. Positive starting on line voltages as low as 106 v with no detrimental effect on lamp life is possible. Line voltage variations have no noticeable effect on lamp brilliancy.

Case of ballast measures 13-3/16 x 3-1/8 x 2-5/8 in. The 12½-lb units bear Underwriters' Laboratories approval and meet ASA test specification C82.1 for fluorescent lamp ballasts. Made by **Jefferson Electric Co.**, 903 S. 25th St., Bellwood, Ill.

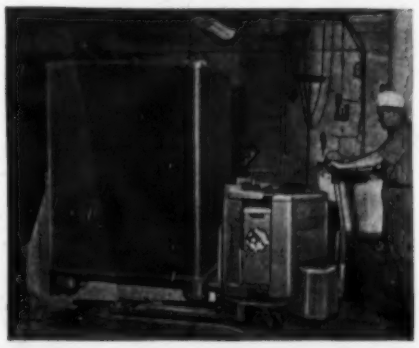
▲ For more details circle NED-7556 on enclosed inquiry slip ▲

COPYING MACHINE
desk model makes 1000 copies hourly

Photo-exact copies of any translucent invoice, letter or record can be made up to 16 in. wide and any length at rate of 1000 per hour by Ozamatic copying machine. Desk model machine reproduces letter-size copy for about 1½ cents, including operating costs and machine depreciation. Two or more complicated reports can be combined on one sheet of paper. Variable data can be added to or deleted from a constant form and a reprint made of just the information desired. Copies can be turned out in black, blue, red, sepia and yellow on paper, cloth or foil. Made by **General Aniline & Film Corp.**, Ozalid Div., 16 Ansco Rd., Johnson City, N. Y.

▲ For more details circle NED-7557 on enclosed inquiry slip ▲

STACKING TRUCK
for handling bulk material bins

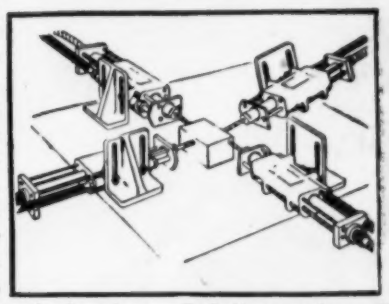


Made in telescopic and nontelescopic models for 4000-lb loads up to 48 in. long, Jackstacker industrial truck accommodates tightly sealed Tote Bin containers for handling, shipping and storing bulk materials. Nontelescopic model has fork elevation of 53 in., while telescopic model has fork elevation of 77 in., sufficient to double-deck bins. Lifting forks have 11-in. opening. Bins are tilted on tilt rack by special lifting arrangement. Front and rear wheels and stabilizing casters are rubber tired. Truck has two speeds forward and reverse, electric lift and lowering and spring-set, electrically released brake. All controls are in handle head and can be operated with handle in any position. Made by **Lewis-Shepard Products Inc.**, 194 Walnut St., Watertown 72, Mass.

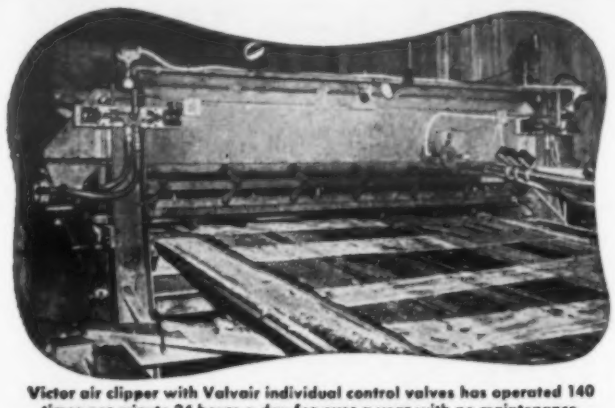
▲ For more details circle NED-7558 on enclosed inquiry slip ▲

MULTIPLE ANGLE DRILL UNIT
4-in. stroke actuated hydraulically

Virtually unlimited freedom of setup which simplifies and reduces cost of drilling holes at any angle can be attained through use of this Multi-Angle drill unit. Compact drill head can be easily mounted on jigs and fixtures or built into special machines. It is powered by heavy duty flexible shaft with hydraulically actuated 4-in. stroke. Compact design allows a number of units to be mounted on jig or fixture to drill multiple holes in single piece. Infinite number of adjustments in drilling position are possible. Made by **Commander Mfg. Co.**, Dept. ND, 4225 W. Kinzie St., Chicago 24, Ill.



▲ For more details circle NED-7559 on enclosed inquiry slip ▲



Victor air clipper with Valvair individual control valves has operated 140 times per minute 24 hours a day for over a year with no maintenance.

VALVAIRS Serve Dependably and Long on Lumber and Plywood Machinery

Again and again, lumber companies re-order Valvair air control valves. Valvair users report many years of service without maintenance. Our unique "OU" packer (the only wearing part) combines the best features of O-ring and self-sealing U-cup designs. No metal seats to deteriorate. If replacement of the valve *does* become necessary, the piping is not disturbed; a few minutes are enough.

IMPORTANT: Valvair design protects against flying sawdust and other erosive particles. Let us explain.

VALVAIR CORPORATION • 454 Morgan Avenue, Akron 11, Ohio
AFFILIATE: SINCLAIR-COLLINS VALVE CO.

Rely Upon Valvair — 2-WAY — 3-WAY — 4-WAY

For more details circle NED-7560 on enclosed inquiry slip

Dependable

WOODEN STEEL-BOUND
MATERIALS HANDLING EQUIPMENT

ALL PURPOSE SHOP TRUCK

This long-life equipment has hardwood sides and floors, heavy steel corners and braces, all bolted construction which enables easy replacement of damaged boards. For economy and efficiency put DEPENDABLE materials handling equipment to work in your plant. Our experienced engineers will work with you in solving your problems and design equipment suited to your operations. Write for catalog and complete information today.

CHANNEL LEG SKID

V-LEG SKID

STREATOR Dependable SINCE 1913
MANUFACTURING CO.
STREATOR, ILLINOIS

For more details circle NED-7561 on enclosed inquiry slip

Thank You!

This issue establishes an all-time record for number of new products announced, number of advertisements and number of pages. One of the main reasons for the growth of New Equipment Digest has been the exceptional response of you readers. More sales-inquiries are being sent to manufacturers through our reader service department today than at any time in our history. We appreciate your part in our success. It's a pleasure to serve you.

A. N. Gregg
EDITOR

ELECTRONIC SCALE
permits remote reading or recording

An electronic scale is now available that would permit, for example, a railroad weigh master, sitting at his station, to read weight of shipment being made yards down the track. The Ametron Electronic scale, using electronic cells will record and print exact weight on tickets, tape or ledger remotely located from scale. Weights can be read in company offices the same instant products are being weighed in shipping department. Made by **Streeter-Amet Co.**, Dept. E-1, 4101 Ravenswood Ave., Chicago 13, Ill.

For more details circle NED-7562 on enclosed inquiry slip

FAN DIAL SCALES
range from 1 to 40-lb capacities

Automatic fan dial scales available in 5 types and 23 models provide precision equipment for unknown or catch weighing. Scales in capacities of 1 to 40 lb are of pendulum type with cast iron lever system, tool steel pivots and agate bearings. Each is fitted with hairline indicator and adjustable oil dashpot which has sealing device so scale can be shipped with dashpot filled with proper oil. Base and housing are cast aluminum and are hammer finished in gray, black or white baked enamel. Windows are of nonbreakable Plexiglas. Made by **Exact Weight Scale Co.**, 930 W. Fifth Ave., Columbus 8, O.

For more details circle NED-7563 on enclosed inquiry slip

ALLEGHENY STEELBAND COMPANY

STEELBAND
Leads the Band

Now is the time to order Allegheny STEELBAND strapping, seals, tools, and accessories to insure your present and future needs. Our company is rapidly expanding to meet the growing demand for our products.

ALLEGHENY STEELBAND CO.
Box 716, Pittsburgh 30, Pa.
(WAlnut 1-7100)

STRAPPING AND SEALS — STEELBAND — ACCESSORIES AND TOOLS

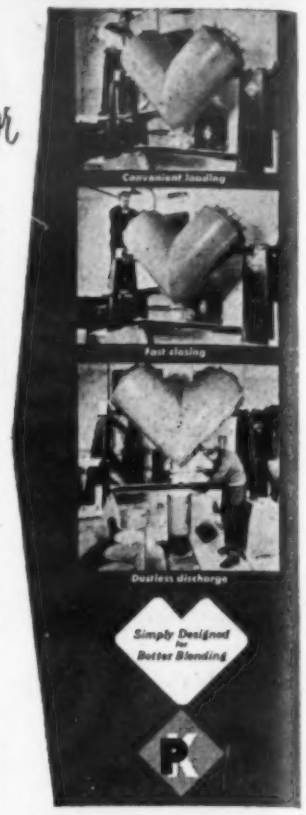
For more details circle NED-7564 on enclosed inquiry slip

Ends Powder Caking for DAVIES-YOUNG

For some time, Davies-Young's detergent, "Dy-Sulph," had been produced in a small way in a ribbon blender. Disadvantages of that method were two-fold: the blender was too small and the blended powder had a tendency to cake. One of their suppliers recommended a p-k Twin Shell Blender* to overcome both difficulties.

Today, production has been materially increased, the powder is perfectly uniform, with the caking factor eliminated. Cleaning is simplified by the baffle-free design of p-k Blenders—loading and unloading time has been reduced. p-k Twin Shell Blenders mix dry materials faster and to greater uniformity than any other blender. Production units have a capacity range of 1 to 250 cu. ft. and operate at speeds from 6 to 29 rpm.

You will want to know more about the uniformity and increased production obtainable with p-k Twin Shell Blenders—send for catalog 401 on production models and catalog 402 on laboratory models. p-k will be pleased to run a test blend of your materials to demonstrate the outstanding merit of this new but service-proved method of dry blending. *Patented



the Patterson-Kelley Co., Inc.
23 Lackawanna Ave.
East Stroudsburg, Pennsylvania

For more details circle NED-7565 on enclosed inquiry slip

BROWNING
First Again!

WITH "UNBREAKABLE" MALLEABLE IRON SPLIT TAPER BUSHINGS

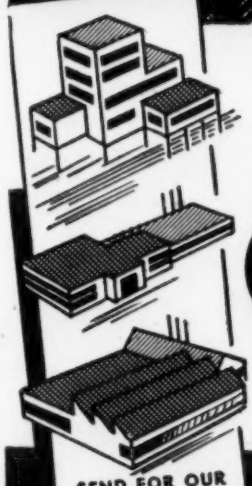
in BROWNING GRIPBELT SHEAVES

FLEXIBLE AND RIGID COUPLINGS and BROWNING PAPER PULLEYS

Write for the name of the BROWNING distributor near you
BROWNING MANUFACTURING COMPANY
MAYSVILLE, KENTUCKY, U. S. A.

For more details circle NED-7566 on enclosed inquiry slip

DO A BIGGER AND BETTER JOB WITH



REG. U.S. PAT. OFF.
Kleenslot
WEDGE WIRE PREPARATION SCREENS

HERE'S HOW IT'S DONE

The non-clogging and non-blinding principle of Kleenslot screens is clearly illustrated in the circular diagram above.

SEND FOR OUR ILLUSTRATED CATALOG

Wedge-Wire CORPORATION
5604 CLARK AVE. CLEVELAND 2, OHIO

For more details circle NED-7567 on enclosed inquiry slip

AMERICAN makes good STOCK gears ... conveniently available to you through good distributors

You'll find American STOCK Gears meet every requirement for high quality, accurate tooth contour, smooth, quiet performance and long life.

Complete line includes:

Spur Gears . . . Racks . . . Change Gears . . . Internal Gears . . . Miter Gears . . . Bevel Gears . . . Ratchets and Pawls . . . Spiral Gears . . . Worms and Worm Wheels.

Write us for name of distributor nearest you . . . Also request a free copy of Specification Catalog.

asg AMERICAN STOCK GEAR division
PERFECTION GEAR COMPANY • HARVEY, ILLINOIS

For more details circle NED-7568 on enclosed inquiry slip

Introducing A NEW LINE OF

RIGID PLASTIC PIPE

Johnson Plastic Corp., producers of quality Johnsonite Flexible Plastic Pipe, is now making Rigid plastic pipe in 6 different diameters from ½" - 6", and corresponding fittings for use in diversified industries everywhere.

STANDARD THREADED & COUPLED PIPE

Has identical I.D. and O.D. of standard steel pipe. Furnished in 20-foot lengths with threaded coupling at one end. Not affected by acid or alkali water. Won't rust, rot or corrode. Made from a non-toxic material, tough enough to withstand temperature ranges from -50° to 140° F.

STANDARD PIPE—A thinner side-wall pipe at lower cost. Made in 20-foot lengths. Plain ends but fittings can be cemented to pipe.

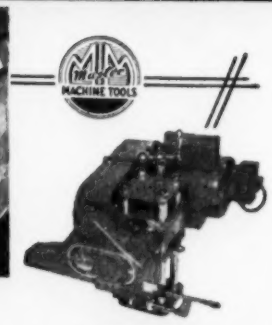
FITTINGS—Available in Johnsonite Plastic from ½" to 2" sizes. Threaded tees, elbows and couplings. Send for our catalog.

JOHNSON PLASTIC CORP.
P. O. BOX 268 • CHAGRIN FALLS, O.

For more details circle NED-7569 on enclosed inquiry slip

master MILLING • GRINDING • KEYSEATING ATTACHMENTS

INTERNAL KEYWAY CUTTING WITH MASTER SLOTTING HEAD ON A LATHE



Master Universal Slotting and Keyseating Head

THREE SIZES

Model "C," ⅓ h. p., 9" to 13" lathes
Model "B," ½ or ¾ h. p., 13" to 18" lathes
Model "M," 1 or 1½ h. p., 18" to 72" lathes

The multi-purpose Master milling, grinding and keyseating attachments increase the facilities and capacity of your lathes, turrets, or mills, in maintenance shops, tool rooms, as well as production shops. For the cost of one single purpose machine you can have several Master units producing on your present equipment.

1½ H.P. MODEL "M" ON LATHE MILLING ½" KEYWAY 1 FT. PER MINUTE

WRITE FOR TWENTY-FOUR PAGE CATALOG

MASTER MANUFACTURING CO.
1318 EAST AVENUE A • HUTCHINSON, KANSAS, U. S. A.

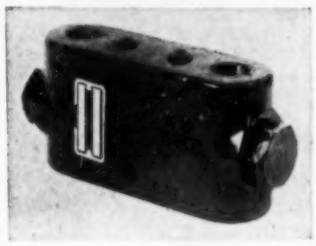
For more details circle NED-7570 on enclosed inquiry slip

PORTABLE SPRAYER
has own built-in compressor

Dual piston type built-in compressor, self-lubricating 10,000 rpm motor, mixing head and gun are combined as one unit in Payswell Spray-pak portable sprayer (*see NED, Feb. '49*). Any liquid that is sprayable can be used by gun which can spray 1 qt in 4 minutes at 50 psi air pressure. Outfit is supplied with carrying case, spare aluminum canisters, covers, gaskets, three interchangeable nozzles, strainers, respirator with refills, brush, oil and instruction manual. Distributed by **Kapner Hardware, Inc.,** Dept. D, 2248 Second Ave., New York 29, N. Y.

For more details circle NED-7571 on enclosed inquiry slip

HYDRAULIC FLOW REGULATOR
for double-acting cylinders



Automatic plunger-type oil hydraulic flow regulating valve, 450 series, regulates flow of scavenger oil from double-acting cylinder at same rate oil is supplied by pump to power side. This action minimizes hydraulic voids when, in lowering heavy loads, operating cylinder tends to lower faster than pump can supply oil to it, or in systems where linkage is such that over-center operation is involved. Valves are available in various capacities up to 25 gpm at 1000 psi. Made by **Hydraulic Equipment Co.,** 1108 E. 222nd St., Cleveland 17, O.

For more details circle NED-7572 on enclosed inquiry slip

FLEXIBLE PRESSURE UNION
for water, air, oils and chemicals

Flexible to 180 degrees and leakproof, this packless pressure union can be used for steam, water, oil, chemicals and gas. Body is high density alloy, machined to carry bronze inserts which hold flexible sphere. Inserts carry piston rings to prevent leaks. Sphere or rotating member is hard alloy, lapped with inserts. All-metal seal unit can be furnished in all types of materials. Made by **Phillips Rotary Joint & Valve Co.,** Dept. P.R.S.B., 5711-13 Blvd. E., West New York, N. J.

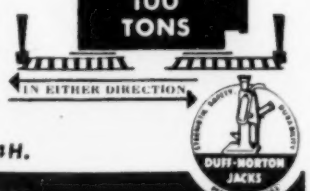
For more details circle NED-7573 on enclosed inquiry slip

FOR EASY SHIFTING OF HEAVY EQUIPMENT

DUFF-NORTON *Traversing Bases*

Heavy machinery and equipment can be shifted with ease by means of Duff-Norton Traversing Bases. Used with or without screw and ratchet type jacks, loads can be moved horizontally up to 26". You should have a set of these bases in your plant. Investigate the savings they make possible.

HOLDS AND MOVES LOADS UP TO 100 TONS



Write today for Bulletin AD-4H.

THE DUFF-NORTON MANUFACTURING CO.
Main Plant and General Offices: PITTSBURGH 30, PA.—Canadian Plant: TORONTO 6, ONT.
"The House that Jacks Built"

For more details circle NED-7574 on enclosed inquiry slip

BE READY FOR *Every* CLEANING NEED

IDEAL BLO-R-VAC

Power-packed and with highest cleaning efficiency, IDEAL Blo-R-Vac speeds *all* your cleaning jobs! Low in first cost, it's actually *three rugged cleaners in one!* Vacuums lint, dirt, picks up water. Promotes scrap salvage — metal particles stay in big tank; lighter particles go into dust-tight bag. Power unit serves as a separate blower-sprayer or hand type cleaner. Full selection of attachments. 1⅓ or ⅔ H.P.

Triple Value!

A "Tank-Type" Cleaner
A "Hand-Type" Cleaner
A Blower-Sprayer

All in One!

CONVERTS IN A JIFFY! . . . from a "tank-type" cleaner to a "hand-type" cleaner or blower.

Sold Through America's Leading Distributors
Canadian Distributor: Irving Smith, Ltd., Montreal

TRY IT FREE!

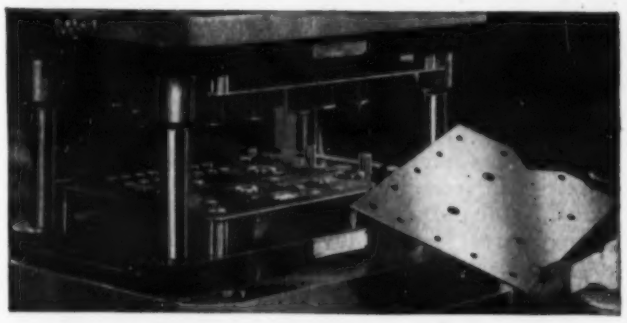
IDEAL INDUSTRIES, INC.
1032 Park Ave., Sycamore, Illinois
Arrange FREE DEMONSTRATION of your new BLO-R-VAC in our plant.

Name_____
Company_____
Address_____
City_____ Zone____ State____

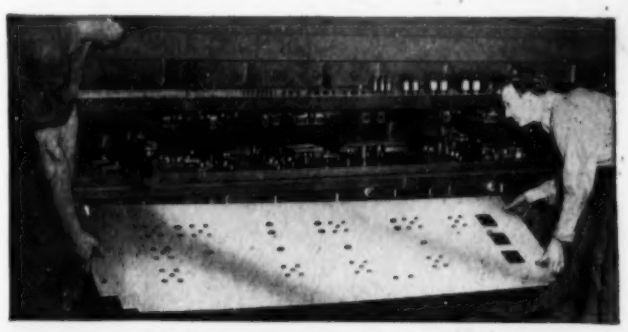
For more details circle NED-7575 on enclosed inquiry slip

New • Fast • Proven

LOW COST METHODS for PERFORATING and NOTCHING SHEET METALS



Whistler *MAGNETIC* Dies at work in large inclinable press. Magnetized units hold the retainers. No bolting required. A fast, economical method in making up a punch and die set for short or long runs. All parts re-usable.



Whistler *ADJUSTABLE* Dies on ⅛" steel perforating and notching job, using Tee slotted die set. With Whistler Adjustable Punch and Die units production starts within hours instead of weeks. Last minute changes made quickly.

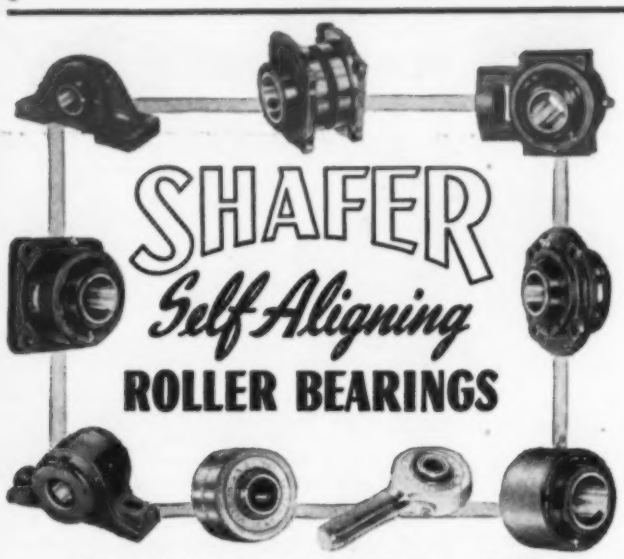
Both methods feature: LOW DIE COSTS
All units and parts are interchangeable and used repeatedly in different arrangements. **INCREASE PRESS PRODUCTION—** Down time is minutes as compared to hours for change-over. For precision work in all types and sizes of presses. **START PRODUCTION *at once.*** Pierce up to ¼" thick mild steel. Saving money in the best known plants.

Here are the complete details with prices and application illustrations. Send for these catalogs. No obligation.

NAME_____
FIRM_____
ADDRESS_____
CITY_____ ZONE____ STATE____

S. B. WHISTLER & SONS, Inc.
Adjustable, Magnetic, Custom and Cam Dies for all Industry
750 Military Road **Buffalo 23, New York**

For more details circle NED-7576 on enclosed inquiry slip



SHAFER
Self Aligning
ROLLER BEARINGS

Pillow Blocks-fixed and expansion • Flange Units • Take-Up Units • Take-Up and Frame Units • Cartridge Units • Flange Cartridge Units • Duplex Units • Conveyor Rolls • Single and Double Row Bearings • Aircraft Control Bearings

SHAFER CONCAVEX

SHAFER BEARING CORPORATION
801 Burlington Avenue • Downers Grove, Illinois

For more details circle NED-7577 on enclosed inquiry slip

this new WELDING DESIGN MANUAL
FREE!
FOR THE ASKING

To assist you in your re-tooling problems . . . or to help you analyze your present welding methods so that you may enjoy maximum speed, efficiency, and economy in many of YOUR production problems...

Over 40 pages of helpful data covering basic and advanced welding techniques and designs used in fabricating and assembly. Profusely illustrated with scores of application drawings; weld diagrams; tables containing latest information on melting temperatures, tensile strengths, corrosion factors; charts; alloy recommendations; etc. Convenient digest size.

This just-off-the-press book is "must" reading for anyone engaged in defense production and design, and will certainly be time profitably spent for any production man.

SEE . . . The unbelievable savings in metal-joining which can now be yours through the use of "Low Temperature Welding Alloys"® discovered a few years ago and now used in over 78,000 industrial plants throughout America for more efficient metal-working production as well as for salvaging irreplaceable tool and machine parts.

Over 100 different, new, EUTECTIC Low Temperature WELDING ALLOYS® and EUTECTOR® Fluxes are job-engineered for use on ALL metals—cast iron, alloy steels, aluminum, copper and nickel alloys, die castings, overlays, etc., and may be applied with ALL heating methods—torch, arc, furnace, induction heating, etc.

SEND FOR YOUR COPY TODAY!

EUTECTIC WELDING ALLOYS CORPORATION
172nd Street at Northern Boulevard • Flushing, New York, N. Y.

For more details circle NED-7578 on enclosed inquiry slip

Do You USE or NEED
INFRARED HEAT?

THESE USEFUL
DATA SHEETS
Show you how to
SAVE TIME & MONEY
with CHROMALOX
Electric RADIANT
HEATERS

TELL US your application problems and we'll send you valuable information which may lead to improved production at decreased costs on the jobs for which you use or need infrared heat in your plant.

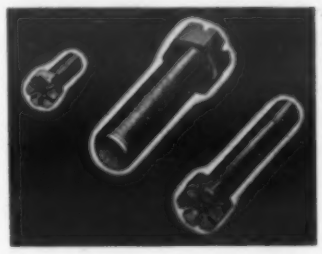
EDWIN L. WIEGAND CO., Industrial Div.
7509 Thomas Boulevard, Pittsburgh 8, Pa.
I need infrared heat for _____
_____
Send me application file on above.
Name _____
Company _____
Street _____
City _____ Zone _____
State _____ IB-21

See other advertisement on page 57

CHROMALOX
ELECTRIC HEAT FOR MODERN INDUSTRY

For more details circle NED-7579 on enclosed inquiry slip

SELF-LOCKING BOLTS
slotted bolt resists vibration



When drawn up against a rigid seat, this slotted type Place bolt requires no nuts, washers or locking devices. Cold-headed of carbon or alloy steel, these reusable bolts are offered in American standard coarse or fine threads in sizes from ¼ to 1 in. Upset slots across top of head divide it into six equal segments and form narrow circular recess under head and next to shank. As bolt is drawn up, spring action of head assures locking action without danger of fatigue, impact or shock failure. Made by **National Screw & Mfg. Co.**, 2450 E. 75th St., Cleveland 4, O.

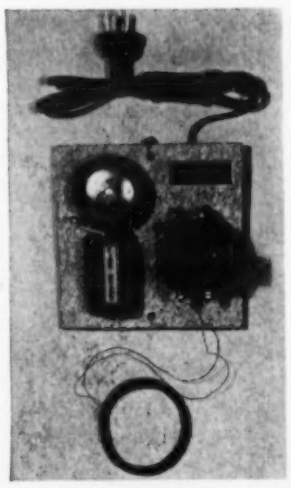
For more details circle NED-7580 on enclosed inquiry slip

AIR SUPPLY HOSE REEL
also acts as tool balance

Easily installed over work bench on assembly lines, combined tool suspension and air supply hose reel is equipped with 15 ft of ¼-in. ID hose with male fitting standard. Tool is suspended by hose which supplies air. Weight of tool is counterbalanced by spring tension of reel. Releasing tool lifts it automatically to predetermined position over work spot. Rubber bumper controls length of travel when tool is released. Brackets permit mounting on post, wall or hanging cable. Made by **Wayne Pump Co.**, 520 Tecumseh St., Ft. Wayne 4, Ind.

For more details circle NED-7581 on enclosed inquiry slip

FIRE ALARM SYSTEM
is installed with screwdriver



Immediately at fire outbreak, Fire Chief electric alarm system rings warning bell. It can be used in one or throughout many rooms in the office, factory, shop, garage or warehouse. Installation requires only attaching panel to wall near electric outlet, plugging it in and hooking up specially sensitized wire. System is tamperproof and lasts many years without servicing. Unit is completely tested and comes with 50 ft of wire. Additional wire is obtainable. Distributed by **Heat Timer Corp.**, 520-A Broadway, New York 12, N. Y.

For more details circle NED-7582 on enclosed inquiry slip

90° Curves 10'-0" Straight Sections

IMMEDIATE SHIPMENT

STOCK ROLLER CONVEYOR

How many sections do you need? Offered in several sizes for average duty conveying. Roller spacing 4" or 6" centers. Roller lengths of 12", 16" and 20". Capacity 75 lbs. per ft. with supports on 10'-0" centers and 380 lbs. per foot with supports on 5'-0" centers. Both stationary and portable supports available. Write for literature.

Check your needs today

Logan Conveyors
LOGAN CO., 215 CABEL ST., LOUISVILLE, KY.

For more details circle NED-7583 on enclosed inquiry slip

BASA HAMMERS • FAVORITE WRENCHES • EMPIRE MALLETS
PALMETTO Packings
MORAN'S COUPLINGS • "TUSKO" WALRUS POLISHING LEATHER

ACID GOT THE BITE ON YOU?

-pack it away with
PALMETTO'S
SUPER-CUTNO

Built to take the punishment of sulphuric, nitric, mixed, heavy and other acids — and service on all acid-handling pumps and valves. Select long fibre pure blue asbestos . . . each strand impregnated with special acid-resisting self lubricant. Will not score, overheat, or nitrate. Plaited, twisted, ring.

Let Palmetto Blue Asbestos also take the bite out of acid problems as pressure-bonded Sheet, as Dry Blue Rope.

• Write for new bulletin LP-10 . . . for full particulars on Super-Cutno and the entire Palmetto line of self-lubricating packings for all industry.

GREENE, TWEED & CO.
NORTH WALES, PENNSYLVANIA

Contact your fully-stocked Palmetto distributor on all packing problems . . . ask him about our special tools.

For more details circle NED-7584 on enclosed inquiry slip

TRANSALL Heavy Duty Idlers are **Pre**-Lubricated

The high quality lubricant is sealed in.

No lubrication labor. No. lubricant cost.

Because of the permanent lubrication and the rugged construction, TRANSALL Idlers have a greater life expectancy than other makes of idlers. The more severe the service, the greater this advantage.

Why not investigate how we can help you keep operating costs to a minimum?

TRANSALL Idlers will probably slip right into your present installations, since they are dimensionally interchangeable with most leading lines.

Immediate Shipment
TRANSALL INC.
Manufacturers of a complete line of Belt Conveyor Equipment
119 North 11th St. Birmingham 4, Ala.

For more details circle NED-7585 on enclosed inquiry slip

AJUSTRITE
TRADE MARK

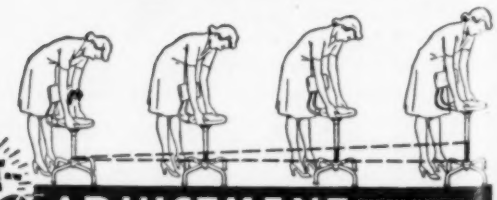
AUTOMATIC ADJUSTABLE
STOOLS

Adjustrite (formerly Kewaunee) adjustable stools and chairs are used extensively in Factories, Laboratories, Hospitals, Offices, Schools, Colleges and Government Agencies. User adjusts to any desired height—instantly.

Choice of 7 models. Height adjustment 15" to 20"; 18" to 26". May be equipped with adjustable back rest, foot rest, seat cushion.

Write for literature and free trial offer.

AJUSTO EQUIPMENT CO.
2144 Madison Avenue Toledo 2, Ohio



SPLIT-SECOND ADJUSTMENT • • •
TO ANY HEIGHT DESIRED

For more details circle NED-7586 on enclosed inquiry slip

New 1951-52

ENGINEERING MANUAL

covering line support clips, clamps, blocks and cushioning materials. Also includes wire harness, shims, busbars and brackets.

Send now for your copy of this new 38-page manual. It gives detailed prints and complete specifications covering materials, finishes and engineering data on our 12,000 types and sizes of aluminum alloy, steel and stainless steel clips and clamps for aircraft and industrial use. Contains everything required for the design engineer. Especially helpful to the new user. New items in this issue—A new silicate rubber cushioning material for high temp. Six new styles of brackets. Four new multiple wiring clamps. Also added clamps for 5/16" and 3/8" bolt sizes in addition to 1/4" and #10 types. For your copy, write today to Thomas Associates, 4607 Alger St., Los Angeles 39, Calif.

World's largest producers of AN735, AN742 and AN743.

For more details circle **NED-7587** on enclosed inquiry slip

LIGHTWEIGHT SPRAY GUN
sprays medium and light viscosities

Use of aluminum casting for gun body of model 29 spray gun reduces weight to 20 oz, thus minimizing fatigue of operators. Using nozzle set-ups standard on most heavy duty production guns, this model has cartridge type air valve for quick replacement and brass and steel material passage to protect aluminum from corrosion and erosion caused by certain finishes and fluids. Drop in air pressure between air inlet and nozzle is small. Gun can be used to spray lacquers, synthetic enamels, paints and other finishes and coatings of light or medium viscosity. Made by **Binks Mfg. Co.,** Dept. NED, 3122 Carroll Ave., Chicago 12, Ill.

For more details circle **NED-7589** on enclosed inquiry slip

TENSION LOAD INDICATOR
measures loads at remote points

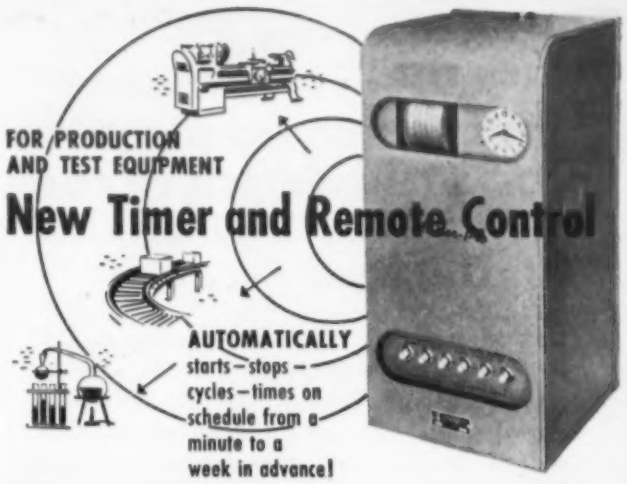
Designed for measuring tension, weight or tractive loads remotely, Tens-O-Trol system is electro-mechanical in operation. Standard traction dynamometer is equipped with selsyn motor. This is connected by means of heavy rubber covered cable to repeater motor housed in metal cabinet and operates dial indicator. External 12-v dry battery supplies the necessary current. Loads imposed on dynamometer can be read instantly at repeater station which can be placed at point up to 400 ft away. Twelve capacities are available with ranges of 0-500 lb to 0-50,000 lb. Made by **W. C. Dillon & Co.,** Dept. NED, 1421 S. Circle Ave., Forest Park, Ill.

For more details circle **NED-7590** on enclosed inquiry slip

YARN-CARRYING QUILL
of plastic has long life

Reported to wear two to three times longer than wooden types, Uscolite rubber-plastic yarn-carrying quill cannot splinter, chip or warp. It is unaffected by moisture and has high surface friction for good yarn holding properties. Uniform spindle fit is assured because each lot of quills is molded to order. It is made in blue, gray and brown in 8 and 8¾-in. lengths. Made by **United States Rubber Co.,** 1207 Rockefeller Center, New York 20, N. Y.

For more details circle **NED-7591** on enclosed inquiry slip



Cincinnati "MASTER-PRO"

Precision-built, compact, dependable. Provides up to six circuits for accurate timing in advance. Indispensable for positive control of equipment and processes. Self-regulating; develops 24 volts DC and 24 or 115 volts AC to trip relays, switches; control secondary clocks, time recorders; sound signals. Operates on regular 115 volt AC. Write for literature, or see your Cincinnati distributor.

THE CINCINNATI TIME RECORDER CO.
1733 Central Ave. Cincinnati 14, Ohio
Pioneer in Development and Manufacture of Time Control Equipment Since 1896

For more details circle **NED-7593** on enclosed inquiry slip

SIMPLER FLOW MEASUREMENT in the palm of your hand

NEW! MERCURY-LESS!
FOXBORO
DIFFERENTIAL PRESSURE CELL

Simplify troublesome flow problems . . . especially where corrosion is a factor or the use of mercury is objectionable. This unique flow measuring device — the Foxboro d/p Cell — reduces installation and operating costs, combines measurement and transmission in one simple, compact unit.

OUTSTANDING FEATURES

- *Uses no mercury*
- *Zero Displacement*
- *Easily calibrated*
- *Steel or Stainless Steel Construction*
- *Weighs only 20 pounds*
- *Ranges: 25" to 800" H_2O*

WRITE FOR BULLETIN 420. The Foxboro Company, 13410 Neponset Avenue, Foxboro, Mass., U.S.A.

FOXBORO Reg. U.S. Pat. Off. ACCURATE FLOW MEASUREMENT

For more details circle **NED-7594** on enclosed inquiry slip

NOW

pre-color your metal products BEFORE fabricating

ENAMELSTRIP
STEEL, ALUMINUM, AND BRASS PRE-FINISHED
COLOR COIL

saves time! **saves labor!** **saves money!**

Users of enamelstrip in continuous-feed coils completely eliminate such costly, time-consuming operations as hand feeding, shearing, cleaning, tumbling, spraying, dipping, rustproofing, baking, drying. Enamelstrip's exclusive pre-treatment and finishing process achieves a flexible, lustrous finish which withstands the stresses of drawing, bending and forming without cracking or peeling. Fabricate your metal parts and products from Enamelstrip to be sure of a smooth, glossy finish *at reduced costs!*

ENAMELSTRIP in any metal, any color, coated and precision slit to your specifications.

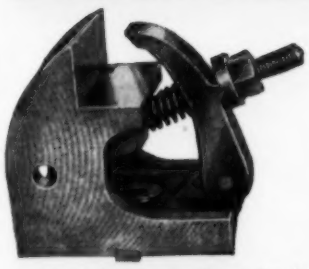
Produced Exclusively by
ENAMELSTRIP CORPORATION
Allentown, Pennsylvania

TODAY see how this important new development improves production . . . and profits! Write immediately for detailed descriptive bulletin to our

National Sales Representatives:
THE COATED OIL CORPORATION
507 West 30th Street New York 1, N. Y.

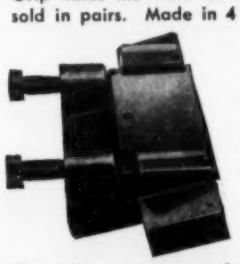
For more details circle **NED-7588** on enclosed inquiry slip

• HART •
MILLING FIXTURES
MASTERS OF 1000 SETUPS

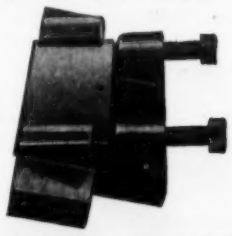


Eliminate many needs for Special, Expensive Jigs and Fixtures

Hart Milling Fixtures make themselves popular and profitable in any shop—are used in either horizontal or vertical position. Suitable to hold round, hexagonal, octagonal, or square stock, aligning the work with the machine. Grip holds the work on the bottom as well as on back. Generally sold in pairs. Made in 4 sizes—to hold stock from ½ to 5 inches.



HART DIVIDED MACHINE VISE JAWS



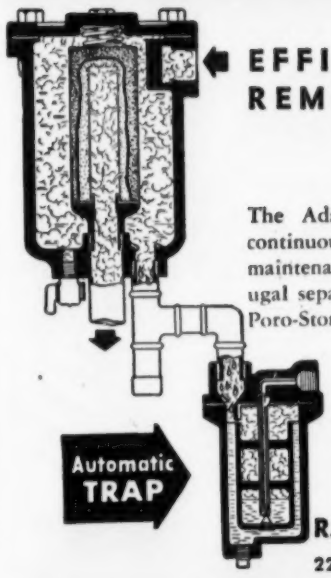
These Jaws are very useful on any machine table. They clamp or bolt to the table, the angles firmly holding the work down. Each hardened tool steel jaw measures 3" x 6" x ½". The angle edges are serrated.

We also manufacture Hart Index Centers. Write for new bulletin.

WALTER W. FIELD & SON INC.
39 HAYWARD STREET, CAMBRIDGE 42, MASS.

For more details circle **NED-7592** on enclosed inquiry slip

Poro-Stone Filtration
FOR COMPRESSED AIR



EFFICIENTLY REMOVES:
OIL, WATER PIPE SCALE

The Adams *Poro-Stone* Filter gives continuous service without attention or maintenance expense. Efficient centrifugal separation *plus* diffusion through Poro-Stone, removes contamination completely without pressure loss. Automatic Trap eliminates attention and assures continuous and efficient filter operation. Write for complete data—Bulletin 176.

R. P. ADAMS CO., INC.
227 E. Park Dr., Buffalo 17, N. Y.

ADAMS *Poro-Stone* **AIR FILTER**

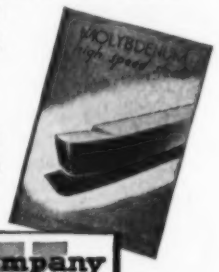
For more details circle **NED-7595** on enclosed inquiry slip

The sun comes up . . .

and just as inevitably you will switch to the use of MOLYBDENUM High Speed Steel

It is readily available from manufacturers and warehouses. Tools made from it give service as good as or even better than the tungsten type of steel—most of the high speed steel used by leading tool manufacturers is the Molybdenum type.

You can save money by changing, and above all, you will help to conserve tungsten for uses for which it is really needed.



The facts you need are in this FREE BOOKLET

Climax Molybdenum Company
500 Fifth Avenue · New York City

HS-10

▲ For more details circle NED-7596 on enclosed inquiry slip ▲

Better FIRE PROTECTION BEGINS WITH ROCKWOOD PRODUCTS

Get the *best* all-around fire fighting tool available — Rockwood triple-action SG-48 WaterFOG Nozzle. A truly all-purpose nozzle that extinguishes and controls fires in flammable liquids and ordinary combustibles with plain water. Protects operator from fumes and heat. Discharges *high velocity* WaterFOG, straight stream and *low velocity* WaterFOG. Available for service on fire hose lines in ¾" — 1" — 1½" and 2½" sizes. Approved by Underwriters' Laboratories, Inc., and Factory Mutual Laboratories.

Write for complete information and prices on Rockwood's growing family of portable fire fighting products.

ROCKWOOD SPRINKLER COMPANY
44 HARLOW STREET WORCESTER 5, MASS.

Portable Fire Protection Division . . .

▲ For more details circle NED-7597 on enclosed inquiry slip ▲

STOP WASTING VALUABLE AIR SPACE!

PALTIER *Utilizes* AIR RIGHTS!

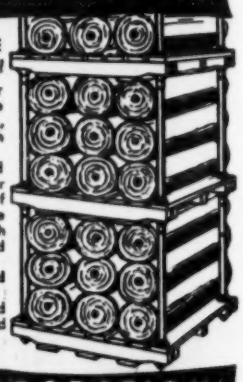
—STACKS CRUSHABLE AND ODD-SHAPE MATERIALS SAFELY—*WITHOUT DAMAGE!*

Whatever the size, shape and nature of your material, you can use the air space of your storage area—and make a better return on maintenance, upkeep and taxes—by stacking it in tiers with PALTIER pallets.

The Flexible PALTIER is an engineered and ruggedly constructed wood pallet fitted at the four corners with exclusive, patented sockets. Posts of the required length and strength slip-fit into these sockets and carry a nesting cone at the top which assures perfect alignment for the upper pallets, and helps the fork truck operator position the load.

NOW—practically anything can be palletized and stacked in tiers to make full use of air rights.

Learn more about this amazing, practical method of stacking stored materials. Fill in coupon and attach to company letterhead for prompt reply.



THE PALTIER CORPORATION
1701 KENTUCKY STREET • MICHIGAN CITY, INDIANA

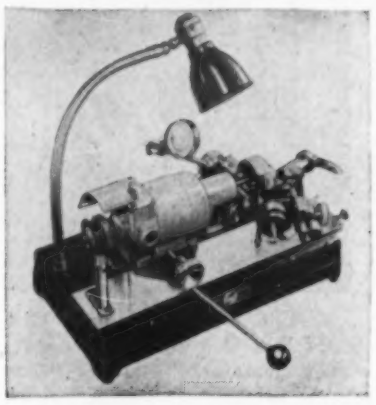
Send detailed information on PALTIER Wood Stacking Pallets and examples of typical installations.

Our materials are _____

Name _____
Company _____
Address _____
City _____ Zone ____ State ____

▲ For more details circle NED-7598 on enclosed inquiry slip ▲

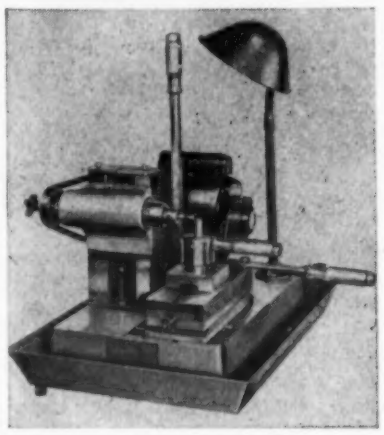
DRILL GRINDER for straight or tapered shanks



Any included angle of drill point from 90 to 160 degrees and any clearance angle from 5 to 15 degrees can be obtained quickly and accurately using this drill grinder for two-lip twist drills. It will accommodate sizes from No. 70 to ¼-in., with either straight or tapered shank. Combined drill rest and diamond holder pregrinds broken drills and dresses rough grinding wheels. Power is furnished by 1/5-hp 115-v motor. Standard equipment includes ¼-in. collet, chuck extension drill holder for No. 52-70 drills, diamond wheel dresser and setup gage. Made by **Dumore Co.**, Fourteenth & Racine Sts., Racine, Wis.

▲ For more details circle NED-7599 on enclosed inquiry slip ▲

BENCH TYPE MACHINE TOOL for turning, milling and grinding



Simple changes in tooling allow LMG-3 combination bench type production machine to be set up for turning, milling or grinding small parts. It features common base, power unit, spindle, and vertical and horizontal slides to which special tooling and fixtures are added. Complete set of tooling is available. Coolant system is optional. Spindle speeds with standard pulleys are 825 and 3450 rpm. Additional speeds from 100 to 7000 rpm are optional. One-inch spindle has No. 7 B & S taper hole and is mounted on heavy ball bearings. Vertical spindle adjustment is 7 in. Machine is driven by ⅓-hp 1725-rpm motor. Made by **Viking Industries**, Dept. J, 220 Montague St., Rockford, Ill.

▲ For more details circle NED-7600 on enclosed inquiry slip ▲

DO YOU KNOW? Called "Protective Maintenance", a new plan has been developed to help industry get the most productivity from its existing facilities. Complete details of the plan as well as a file-size kit of materials are offered to all maintenance engineers. Kit contains instructions, typical balance sheet for keeping data on each machine, planned outage forms, and check lists for motors, controls and other equipment. Also offered is engineering assistance in making complete equipment survey to determine existing conditions, future outages and to guide in setting up a working spare parts control. Developed by General Electric Co., Service Shop Div., Schenectady 5, N. Y.

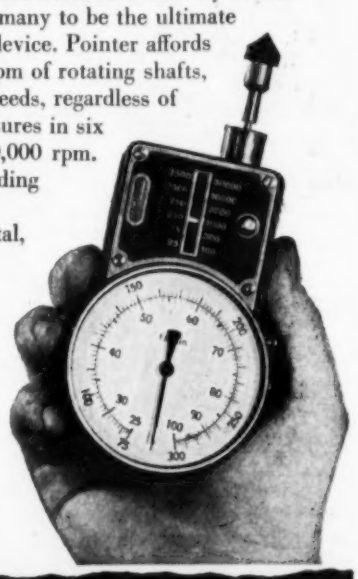
▲ For more details circle NED-7601 on enclosed inquiry slip ▲

Now Available . . .

The Dr. Horn

Precision Hand Tachometer

We are now prepared to make immediate delivery of this instrument, considered by many to be the ultimate in a fine speed measuring device. Pointer affords instantaneous reading of rpm of rotating shafts, or linear and peripheral speeds, regardless of direction of rotation. Measures in six ranges from 25 rpm to 30,000 rpm. Protected against overspeeding damage. Operates equally well in a vertical, horizontal, or slanting position. Simple mechanism. Low maintenance. Long life.



James G. Biddle Co. is the sole distributor and authorized service agency for these highly regarded instruments.

Write for Bulletin 35-65-D.

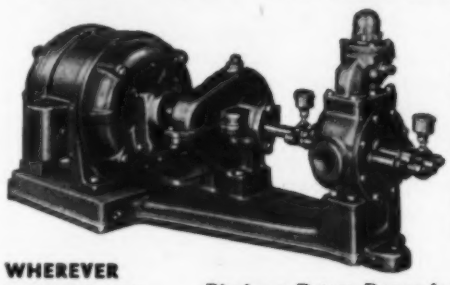
JAMES G. BIDDLE CO.
Electrical & Scientific Instruments
1316 ARCH STREET, PHILADELPHIA 7, PA.

▲ For more details circle NED-7602 on enclosed inquiry slip ▲

IN HAND PUMPS AS IN POWER PUMPS . . .

BLACKMER performance

SPEEDS LIQUID MATERIALS HANDLING



for **POSITIVE CONTROL OF MOST LIQUIDS FROM GASOLINE TO MOLASSES**

WHEREVER LIQUIDS ARE HANDLED

Blackmer Pumps enjoy preference based on performance in all types of industrial and processing plants. Learn why plant engineers prefer Blackmer.

Blackmer Rotary Pumps from 5 to 1500 GPM capacities . . . hand or power-operated . . . provide positive displacement and high suction lift with volatile or viscous liquids.

Get "FACTS" about Rotary Pumps

Write for "FACTS." Latest designs, operating and service features.

BLACKMER PUMP COMPANY
GRAND RAPIDS, MICHIGAN

▲ For more details circle NED-7603 on enclosed inquiry slip ▲

PAGE FENCE *Since 1883*

• AMERICA'S FIRST WIRE FENCE •

Sabotage is a danger which calls for vigilance day and night. Property line vigilance is the job for Page Chain Link Fence, now as it has been for more than 60 years. Consult the nearby, long-experienced Page Fence engineering and erecting firm, which will submit cost estimates without obligation. Name and address will be sent with illustrated fence data on request.

Write *to PAGE FENCE ASSOCIATION in Monessen, Pa., Atlanta, Bridgeport, Chicago, Denver, Detroit, Los Angeles, Philadelphia, New York or San Francisco.*

PRODUCT OF PAGE STEEL & WIRE DIVISION OF AMERICAN CHAIN & CABLE COMPANY, INC.

▲ For more details circle NED-7604 on enclosed inquiry slip ▲

Do you have a tough clamping job?

Whether you need batteries of clamps (like illustrated) or just one or two—whether you clamp tiny parts or huge assemblies requiring nearly 2 tons pressure, there is a Knu-Vise toggle-action clamp for the job.

All Knu-Vise clamps are made for fast, dependable performance, designed to most exacting specifications, based on exhaustive laboratory tests and years of practical use.

Call on our engineers (without obligation) if you want to know whether your clamping is as efficient as it should be.

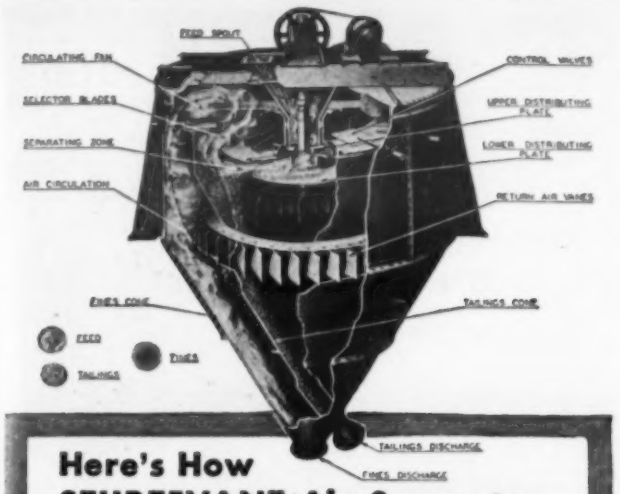
Would you like one of our new catalogs?

Photo Courtesy Consolidated Vultee Aircraft Corporation

Sales Offices in Principal Cities

KNU-VISE PRODUCTS LAPEER MFG. CO.
3062 DAVISON ROAD • LAPEER, MICHIGAN

▲ For more details circle NED-7605 on enclosed inquiry slip ▲



Here's How STURTEVANT Air Separators Increase Production of Fines ...Lower Production Costs

Sturtevant Air Separators effect production savings by increasing output by 25 to 300% . . . reducing power consumption by as much as 50%.

They efficiently carry off all classified materials in any desired fineness from 40 to 325 mesh and finer . . . eliminate the need of screening in certain applications. Capacities available from ¼ to 50 tons per hr. *Write for full details, today.*

Sturtevant Mill Company
114 Clayton Street, Boston 22, Mass.

For more details circle NED-7606 on enclosed inquiry slip

KEEP PRODUCTION ROLLING WITH SWIFT-FLOOR

PLASTIC FLOOR RESURFACER
. . . STANDS 50,000 LB. LOADS
60 SECONDS AFTER APPLICATION

PRIME! FILL! TAMP! USE!

Prime, fill, tamp—and you have an efficient new floor . . . skid-proof, fire-proof, resilient.

Use SWIFT-FLOOR over concrete, wood, steel for complete new floors or patching, indoors and out. Ideal for converting non-productive areas to busy, heavy-duty factory space. Write today for free booklet—"60 Swift Seconds!"

MONROE MAINTENANCE MATERIALS

THE MONROE COMPANY, INC.
10703 QUEBEC AVE. • CLEVELAND 6, OHIO

For more details circle NED-7607 on enclosed inquiry slip

TEFLON

Hermetically sealed to metals
(Patents Pending)

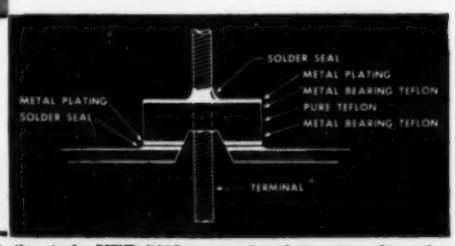
- *For Vacuum-tight TERMINALS and FEED-THROUGH INSULATORS*
- *For Moisture-impervious PRINTED CIRCUITS*
- *For Electrical characteristics ranging from insulator to semi-conductor to low resistance conductor in the same unit.*
- *For Metal Faced Teflon sheets, bars, cylinders and certain fabricated parts for particular problems.*

The fluoro-carbon metal fused seal is a true hermetic seal capable of holding a vacuum for sustained periods. It is recommended where severe service conditions are encountered—vibration, shock, high and low ambient temperatures, thermal shock, extreme climatic conditions.

Because Teflon is being allocated by the Government, only those problems which bear National Production Authority Sanction can be considered at this time.

UNITED STATES GASKET COMPANY
654 N. 10th St. Camden, N. J.

UGS TEFLON PRODUCTS DIVISION



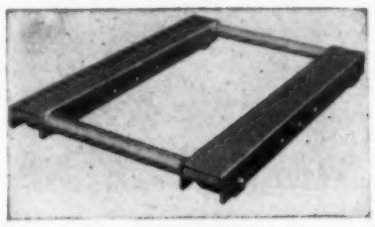
For more details circle NED-7608 on enclosed inquiry slip

SNAP-ACTON SWITCHES
for automatic equipment and controls

Two standard model snap-action switches for use in coin-operated vending machines, record changers, washing machines and aviation, automotive industrial and marine controls employ over-center coil spring construction. Switches are mounted on Bakelite panels; bracket and actuator materials are brass; blades, phosphor bronze; and contacts, silver. Model 2000 has release force of 5.5 oz and requires operating force of 7.5 oz, while model 2001 has release force of 2.7 oz and operating force of 4 oz. They have Underwriters' Laboratories ratings of 6-amp, 125-v ac and 3-amp, 250-v ac. Special adaptions are available offering variations in contact size and materials, spring pressures, actuator shapes and mounting holes. Actuators are cam-following. Made by **Cherry-Channer Corp.**, 42 N. Skokie Blvd., Highland Park, Ill.

For more details circle NED-7609 on enclosed inquiry slip

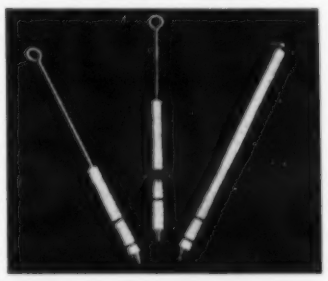
PALLET DOLLIES
36-lb unit carries up to 1 ton



Easily moved from truck or trailer to dock, lightweight pallet dollies are built of channel-side steel frame welded to cross members. They require little space when kept in truck. Steel rollers have grease seal type ball bearings on heavy hexagonal shafts. Frame sizes range from 30 x 24 in. to 48 in. square. Load capacity with four rollers is 2000 lb; six rollers, 3000 lb; eight rollers, 4000 lb; and ten rollers, 5000 lb. Standard units have four rollers, but all frames are punched for ten rollers. Made by **Samuel Olson Mfg. Co.**, 2423 Bloomingdale Ave., Chicago 47, Ill.

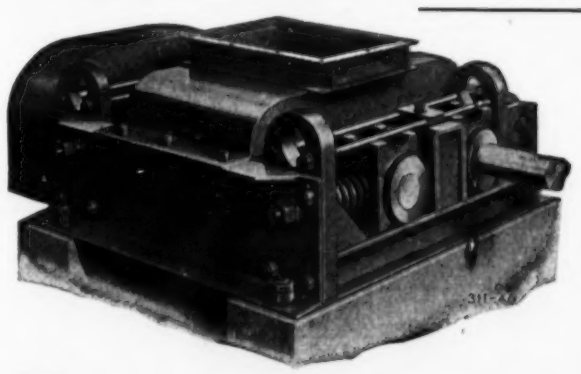
For more details circle NED-7610 on enclosed inquiry slip

MAGNETIC CHIP REMOVERS
are of permanent magnet type



Line of hand operated, load-releasing tubular Multilift Magnetools afford means for removing steel chips or parts from steel surfaces, metal cutting machines, coolant tanks or for boring into tumbling media or carburizing materials to remove parts. Available models include both large and small magnets with hand wipe-off release or mechanical pull-to-release features. They are equipped with neoprene bumper rings to prevent magnet grabbing sides and brass pickup tip to prevent sticking. Resistant to water, oil and gasoline, tools are offered in five models for various job requirements. Diameters are 1/16, ⅜, 1⅜ and 2⅝ in. at prices from $4.25 to $23.60. Made by **Multifinish Mfg. Co.**, Dept. 457, 2114 Monroe Ave., Detroit 7, Mich.

For more details circle NED-7611 on enclosed inquiry slip



DOUBLE ROLL CRUSHERS

(pictured and described in Bulletin No. 794) are our answer to your question: "I have something to reduce—what will I use?" Whether it's material or costs. Jeffrey Double Roll Crushers will likely do the trick. They are widely used for reducing a wide variety of materials—coal, coke, chemicals, cinders, dry clay, burned lime—to 1½" and larger. A minimum of fines, of course. May we expect that question soon?

JEFFREY
ESTABLISHED 1877
THE JEFFREY MANUFACTURING CO.
952 Fourth Street, Columbus 16, Ohio

For more details circle NED-7612 on enclosed inquiry slip

The FIRST Cable to link the Old and New Worlds
was completed by Cyrus W. Field Aug. 5, 1858 —revolutionizing then existing communications.

JERVIS B. WEBB COMPANY was the FIRST to develop—

POWER and FREE CONVEYORS
—an outstanding development in materials handling.

More important than movement from "here to there" is the "pacing"—the setting up the movement of materials so the operators can work in rhythm. Webb Power and Free Conveyor Material Handling Systems give this "rhythm"—yet allow off-the-line placing of loads to desired points without interrupting the flow. They reduce costs, increase efficiency and productivity.

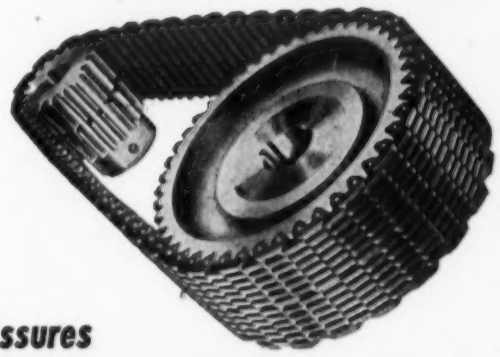
Offering complete flexibility in meeting production problems, Power and Free Conveyors can be tailor-made to your requirements—for any plant large or small. Some of their advantages include:

- Loads are pushed, switched manually or automatically, can be lowered vertically, dispatched automatically by presetting carriers, and can be stopped momentarily anywhere along route.

CONVEYOR ENGINEERS AND MANUFACTURERS
JERVIS B. WEBB COMPANY
8921 ALPINE AVE. DETROIT 4, MICH.
OFFICES IN PRINCIPAL CITIES

For more details circle NED-7613 on enclosed inquiry slip

WHITNEY SILENT CHAIN

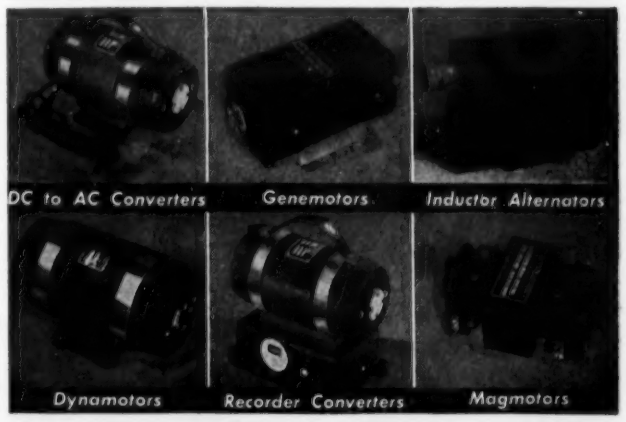


Assures Efficient, Positive Power Transmission

Regardless of your drive problems, Whitney Silent Chain will meet your particular requirements. These tough, rugged chains deliver full power without friction loss or slippage. Their positive grip helps maintain product uniformity. They withstand shock loads without breakage...give long life and cut maintenance to the bone. And remember Whitney Cut Tooth Sprockets complete the combination assuring efficient power transmission. It will pay you to *standardize* on Whitney. Write for complete information.

WHITNEY CHAIN CO.
203 Hamilton Street, Hartford 2, Conn.

For more details circle NED-7614 on enclosed inquiry slip



Carter* ROTARY POWER SUPPLIES

Made in a wide variety of types and capacities adaptable to communications, laboratory and industrial applications of many kinds. Famous for dependable performance. Specially engineered for compact size, light weight, long life. Precision built. Widely used for aircraft communications, direction finders, mobile radios, geophysical instruments, ignition and timing equipment, and many other exacting requirements.

★ MAIL COUPON FOR FREE CATALOGS

*Trade Mark Reg.

CARTER MOTOR COMPANY
2657 Maplewood Avenue
Chicago 47, Illinois

Please send Converter Catalog and Dynamotor Catalog, containing complete information on the entire line of Carter Rotary Power Supplies, and name of nearest distributor.

Name .....
Address .....
City ..... State .....

For more details circle NED-7615 on enclosed inquiry slip

be fresh stay fresh

wear COVER'S FOG-PROOF GOGGLES

FAMOUS "Nod & Shake" Type

Used by thousands, for years, to protect eyes against paint spray, gases, dusts, fumes, smoke. Can be worn with any make respirator. Frames are of soft, pliable rubber that give air-tight fit on any shape face. A few drops of water placed in patented groove keeps fog from forming on inside of single lenses. An easy nod and shake of the head keeps lenses clear indefinitely.

Sample sent $1.85 pp

H. S. COVER, South Bend, Ind.

For more details circle NED-7616 on enclosed inquiry slip

"Solved our marking problem!"

say users everywhere

"The *MULTISTAMP* Hand Stamp Stencil Duplicator is the best thing we've seen for shipping tag and label addressing" . . "for marking boxes, cartons, packages." Quick, clean, accurate, easy-to-use. Prints *1000* or more clear, sharp copies from *one stencil . . one inking*. Just type, write, trace or draw on low-cost stencil, snap in position and print . . like using a rubber-stamp. Non-mechanical, of non-corrosive metal. No moving parts, has replaceable ink pads. 8 complete outfits, $9.50 to $99.50.

IT PRINTS ON
POSTCARDS, SHIPPING TAGS
BOXES CARTONS
LABELS PACKAGES

At Your Office or Shipping Room Supply Dealer

MULTISTAMP STENCIL DUPLICATOR

MANUFACTURED ONLY BY THE MULTISTAMP CO., INC. NORFOLK, VIRGINIA

For more details circle NED-7617 on enclosed inquiry slip

Job-Proven **PLASTIC ROCK FLOORS**

Save priceless production time! Renew old floors over the week-end to last for many years. Heavy traffic only packs denser. Non-skid, noiseless, spark-proof; bonds and feather-edges perfectly on concrete, wood or steel. Each Plastic Rock unit is complete; nothing else to buy; no guesswork; maintenance crew or contractor can apply.

Get free Bulletin N-10.

UNITED LABORATORIES, INC.
16804 Euclid Avenue, Cleveland 12, Ohio
FLOORING • ROOFING • SPECIAL PAINTS
Field Representatives Coast to Coast

For more details circle NED-7618 on enclosed inquiry slip

NOISELESS AIR VIBRATOR
air pockets cushion piston action

Quietness is assured in close proximity to workers with noiseless type AC air vibrator designed for use in packaging food stuffs, chemicals and other bulk materials. Vibration action which is developed by reciprocating movement of hard chrome-plated piston is cushioned by air pockets at each end of vibrator assembly to reduce noise. Device weighs 2 lb, 11 oz, is 6½ in. long and 1½ in. wide. Vibration speed and intensity can be varied as desired. Made by **Cleveland Vibrator Co.**, 2744 Clinton Ave., Cleveland 13, O.

For more details circle NED-7619 on enclosed inquiry slip

STOCK-CARRYING TRUCK
places work at convenient level

Machine stocking and transporting of parts are facilitated with this Universal Stock Toter. Constructed with angle iron frame and 12-gage sheet metal or 13-15-gage ¾-mesh container, truck has two swivel and two rigid 4 or 5-in. casters with semisteel or fiber wheels. Dimensions of container are 30 x 24 x 10-in. deep. Lower shelf can be provided. Made by **Industrial Engineering & Mfg. Co.**, 501 Bliss St., Brimfield, Ind.

For more details circle NED-7620 on enclosed inquiry slip

TORQUE TESTING DEVICE
determines hand torque tool setting

Accurate determination of torque setting of hand torque tools from 1 lb-in. to 7500 lb-ft is possible with Livermont Analizer No. H-7500A. Torque testing device has 15-in. dial with both "hour" and "minute" hands. All types and sizes of hand-operated torque wrenches can be tested, set and adjusted within machine limit by any person, and entire operation is manual. Adapters are available for all torque wrenches and for testing tension exerted against cables, rope or wire. Made by **Richmont, Inc.**, 808 Santa Anita Ave., San Gabriel 2, Calif.

For more details circle NED-7621 on enclosed inquiry slip

Buschman
"Roll-or-Wheel" Conveyors

For a surprisingly small cost you can mechanize the handling of your product by installing, easy-to-set-up, low-cost, portable BUSCHMAN "Roll-or-Wheel" Conveyors.

Available in 10 ft. and 5 ft. straight sections, curves, adjustable stands, 3-way switches and other accessories. Can be moved and reset in a matter of moments. Write for bulletin #15 today.

THE E. W. BUSCHMAN CO., INC.
Spring Grove at Winton Pl.
Cincinnati 32, Ohio

PRODUCE MORE . . . FOR LESS — Buschman Conveyors

For more details circle NED-7622 on enclosed inquiry slip

• Flange Units
• Pillow Blocks
• Take-Up Units
• Cartridge Units
• Hanger Units

SEALMASTER BALL BEARING UNITS

Investigate these Important Features

FOR TOP PERFORMANCE!

✓ **Permanently Sealed.** Patented centrifugal, felt-lined flinger sealing principle seals *in* lubricant, seals *out* dirt and dust, cuts maintenance costs.
✓ **Self-Aligning.** SealMasters are fully self-aligning . . . misalignment of the shaft cannot interfere with the effectiveness of the seal.
✓ **Pre-Lubricated** at the factory, the SealMaster reaches you ready for immediate service.

These points, plus many other engineering features, mean that SealMasters are built to last longer, and give more satisfactory service. Specify SealMasters for replacements, and for new products.

Request a Copy of Catalog 845 for complete details

BEARING DIVISION
STEPHENS-ADAMSON MFG. CO.

Tellevel—Bin Level SealMaster Ball Bearings
Controls Car Loaders Car Pullers Winches
ChangeMaster Variable Speed Reducers Saco Speed Reducers

12 RIDGEWAY AVE., AURORA, ILL.

For more details circle NED-7623 on enclosed inquiry slip

Model 1238

Electrically Actuated Electrical Reset Counter

Up to 1000 counts per minute

A six digit electrically actuated register . . . features Atomic's reliable reset mechanism which permits completely automatic reset at the touch of a button.

The encased Model 1238 (shown above) has built-in power supply permitting register actuation from a vacuum tube or remotely located contactor.

Other models available for panel mounting and original equipment applications.

Matching time counters available.

For complete details, write today for Bulletin 1200.

ATOMIC INSTRUMENT COMPANY

Manufacturers of fine research instrumentation
84 MASSACHUSETTS AVE., CAMBRIDGE 39, MASS.

For more details circle NED-7624 on enclosed inquiry slip

Now! **INDUSTRIAL DOORS PACKAGED!** for erection by your own maintenance men.

Easy operating **CLARK PREST-O-MATIC** *FOLDING or SLIDING* **DOORS** *with* **AUTOMATIC CONTROLS**

Prevent drafts SAVE HEAT...

. . . and provide fatigue-free access between buildings or departments. Approach-control and specially designed mechanism assures swift and smooth operation. NO FITTING or ALTERATIONS! Prest-o-matic Doors fit against walls; leave full width of entrance; avoids need for costly fitting or fussing.

write for Catalog!

FULLY GUARANTEED

Opens or closes in 3½ seconds. With simple instructions for erection, these doors can be set up within 2 hours.

CLARK DOOR COMPANY
511 Hunterdon Avenue, Newark 8, N. J.

For more details circle NED-7625 on enclosed inquiry slip

SAVE TIME *And Manpower*

S-A BOX CAR LOADER

● An S-A portable Box Car Loader *automatically* loads and trims box cars in a fraction of the time ordinarily required by hand methods. The loader operates unattended after being placed in the car and requires only *part time* attention of *one* man. The attendant is therefore able to avoid any dust hazards.

The Standard Loader will handle large tonnages of loose granular material not exceeding 2 inches in lump size.

Write for Bulletin No. 948 with full details

STEPHEN S-ADAMSON MFG. CO.

Tellevel—Bin Level Controls · Car Loaders · SealMaster Ball Bearings · Car Pullers · Winches · Saco Speed Reducers

12 RIDGEWAY AVE., AURORA, ILLINOIS

▲ For more details circle NED-7626 on enclosed inquiry slip ▲

How to save Labor and Money by Centralizing Lubrication

FOR more than 20 years, Farval has been saving manpower and money for users. Through efficient, dependable lubrication of machines and industrial equipment of all kinds, Farval saves 4 ways: It saves oiling labor, it saves lubricant, it reduces bearing expense, it eliminates down time.

The Farval System is a positive mechanical method of delivering oil or grease under pressure to a group of bearings from one Central Station, in exact quantities, as often as desired. It consists of a central pumping unit, two main supply lines and a measuring valve for each bearing.

Bulletin 25 gives you the facts and figures to apply to your own lubrication problems. The Farval Corporation, 3283 East 80th St., Cleveland 4, Ohio.

Write for *FREE* Bulletin 25

FARVAL CENTRALIZED SYSTEMS OF LUBRICATION

▲ For more details circle NED-7627 on enclosed inquiry slip ▲

EVERY SHOP CAN PROFIT—SAVE TIME BY USING THIS PARTS CLEANING SYSTEM

GRAY-MILLS AGITOR

Hundreds of shops are now saving 35% to 65% cleaning time by using Graymills Agitors.

IN THE TOOL ROOM for cleaning dies, jigs, machined parts, etc.

IN PRODUCTION for removing oil, chips and soil from castings, assemblies and parts which are handled individually.

IN THE MAINTENANCE DEPARTMENT AND CUSTOMER REPAIR DEPARTMENT for cleaning machinery, appliance parts, etc.

The Agitor uses cold solvent. SAFE! Construction features reduce hazards. Save skilled hands for skilled work. Get an Agitor!

4 Models from $119.50

Send for New Catalog and bulletin "Graymills Agitor in the Industrial Field."

Only the Agitor Gives You Exclusive 3 Way Action

1. Solvent discharged jet-like agitates tank for soak cleaning.
2. Fountain-like discharge for large parts.
3. Stream of solvent thru hose used for flushing off parts and assemblies.

GRAYMILLS CORPORATION 2008 Ridge Ave., Evanston, Ill.

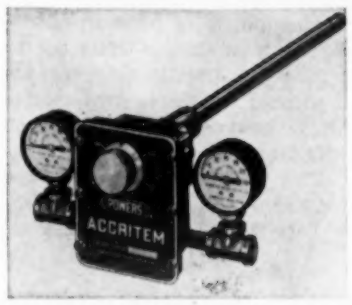
▲ For more details circle NED-7628 on enclosed inquiry slip ▲

FIRE DETECTOR sounds alarm at preset temperature

Steel case mounted against ceiling houses Detect-A-Fire unit which operates on rate compensation principle. It gives alarm when temperature of surrounding air reaches point at which detector is factory-set. Installation can be in new or existing alarm systems, or it can be made to actuate an extinguishing system directly. Construction employs stainless steel sensing tube in direct contact with air and which contains silver electrical contacts. Expansion of tube by heated air closes contacts to sound alarm or operate extinguishing equipment. Units are available for normally-open or normally-closed circuits and for settings up to 325° F. Single unit protects up to 625 sq ft. Made by **Fenwal, Inc.**, 70 Pleasant St., Ashland, Mass.

▲ For more details circle NED-7629 on enclosed inquiry slip ▲

TEMPERATURE REGULATOR controls valve or damper positions



Liquids, air or vapors can be maintained at any desired temperature by this Accritem expansion stem type regulator which controls pneumatic or water operated diaphragm valves or dampers. Device is usable in instantaneous water heaters, heat exchangers, air compressor and engine cooling systems, vats, dryers and textile machines. Calibrated dials of two models provide for temperature adjustment in ranges of 50 to 250° F and 150 to 350° F. Additional features are adjustable sensitivity, overheat protection and ease of installation at point where temperature is to be controlled. Made by **Powers Regulator Co.**, 3501 Oakton St., Skokie, Ill.

▲ For more details circle NED-7630 on enclosed inquiry slip ▲

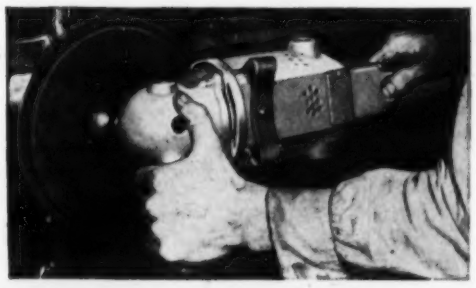
WATER PURIFIER cartridge element is replaceable

Objectionable tastes, odors and foreign matter can be removed from water by model SF-5 purifier without affecting essential mineral properties. Filtering device uses replaceable cartridge containing Sterilium. Cartridge is easily replaced in nonferrous casing without tools. Although designed for use with water coolers, it can be installed at cold water faucet. Made by **Sunroc Co.**, Pennell Rd., Glen Riddle, Pa.

▲ For more details circle NED-7631 on enclosed inquiry slip ▲

SANDING • GRINDING • WIRE BRUSHING

B & D SANDERS Speed up ALL KINDS of Surfacing!



BLACK & DECKER ELECTRIC SANDERS

are so versatile they'll speed up hundreds of jobs around your shop! They drive abrasive discs, saucer grinding wheels, "Whirlwind" wire cup brushes and rotary gouging and planer heads. They're fast, easy to handle, huskily built. You have your choice of four models: 7" Special Sander for intermittent touch-up service; 7" Standard Sander for general-purpose work; and 7" Heavy-Duty and 9" Heavy-Duty for more continuous work and greater output. See your nearby B&D Distributor for a demonstration. Write for free catalog to: The Black & Decker Mfg. Co., 662 Pennsylvania Ave., Towson 4, Md.

LEADING DISTRIBUTORS EVERYWHERE SELL

Black & Decker PORTABLE ELECTRIC TOOLS

▲ For more details circle NED-7632 on enclosed inquiry slip ▲

Calling all users of Speed Reducers!

Get the new **Cleveland Book FREE**

Bulletin 130 gives rating tables, dimensions and other data you need in selecting the right sizes in standard worm-gear speed reducers. Ask for your copy.

New bulletins on other types of Cleveland worm gear drives and worm-gear sets also available. Outline your needs. The Cleveland Worm & Gear Co., 3283 E. 80th St., Cleveland 4, Ohio.

CLEVELAND Worm Gear *Speed Reducers*

▲ For more details circle NED-7633 on enclosed inquiry slip ▲

CM PULLER

...the handiest tool in the plant

Just think of the jobs you can do with this sturdy, low-cost puller

LIFTS OR PULLS at any angle up to 12,000 POUNDS

¾ ton model weighs only 13 lbs. One of the handiest tools ever devised. Does thousands of lifting and pulling jobs. Eliminates unsafe, makeshift methods. Gets work done fast. Costs very little. Pays for itself in countless ways. *Ask your distributor to demonstrate it for you.*

4 sizes ¾, 1½, 3 and 6 ton

Write for this folder

Equipped with famous HERC-ALLOY flexible, welded alloy steel chain.

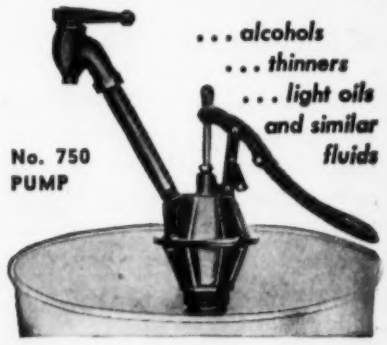
CHISHOLM-MOORE HOIST CORPORATION
(Affiliated with Columbus McKinnon Chain Corporation)
GENERAL OFFICES AND FACTORIES: TONAWANDA, N. Y.
Sales Offices: New York, Chicago, Cleveland • Distributors Everywhere

▲ For more details circle NED-7634 on enclosed inquiry slip ▲

NEW! FOR VOLATILE LIQUIDS

Long Life provided by nylon diaphragm

Leak Proof with positive shut off in fell spout



No. 750 PUMP

...alcohols ...thinners ...light oils and similar fluids

Fast pumping with less effort. Short strokes, large volume—up to 15 gallons per minute.

Trouble-free simplicity. No cylinders, pistons, rings or leathers. Valves are iminated bakelite, valve springs are bronze. Dirt or wear cannot cause suction loss. Unaffected by moisture or condensation.

Only 13.45 complete. Shipped on open account.

ORDER TODAY DIRECT OR SEND FOR COMPLETE DATA

All items shipped direct from Philadelphia

A DEPENDABLE GUIDE TO SAFETY
GENERAL SCIENTIFIC EQUIPMENT COMPANY
TESTED INDUSTRIAL SAFETY PRODUCTS

2701 W. Huntingdon St., Philadelphia 32, Pa.

RESPIRATORS • PUMPS • GOGGLES • SHIELDS • GLOVES • APRONS • HELMETS

▲ For more details circle NED-7635 on enclosed inquiry slip ▲

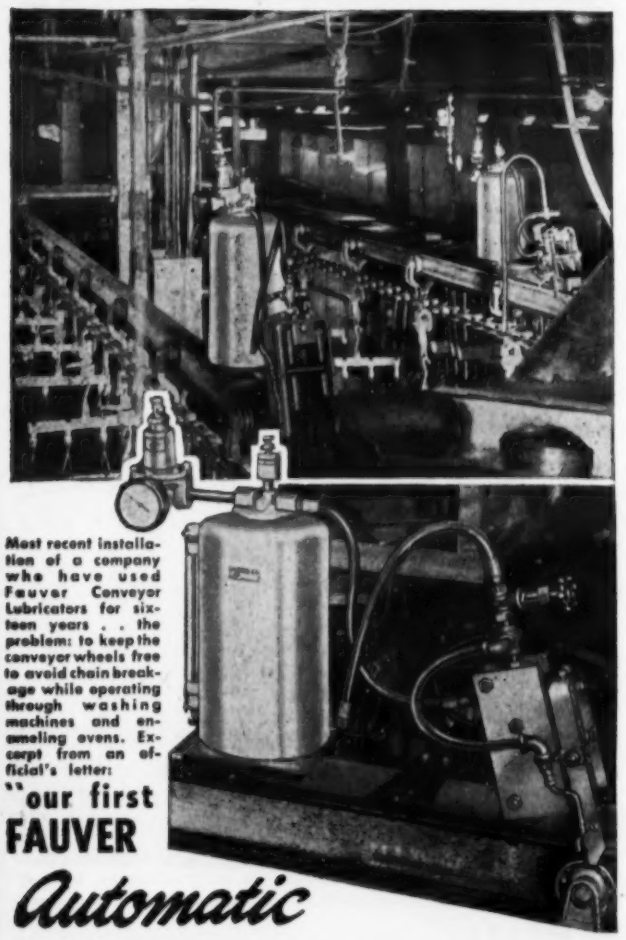
FLOOR SCALES

Now—Toledo Floor Scales with new recessed frame design which fully guards against foreign material lodging beneath platform edge—choice of full or semi frame, with economical conversion for future needs. Double parallel link platform suspension means long life, accurate dependability. Send for bulletin 2406C. Toledo Scale Company, Toledo 1, Ohio.

TOLEDO

HEADQUARTERS FOR SCALES

For more details circle NED-7636 on enclosed inquiry slip



Most recent installation of a company who have used Fauver Conveyor Lubricators for sixteen years . . the problem: to keep the conveyor wheels free to avoid chain breakage while operating through washing machines and enameling ovens. Excerpt from an official's letter:

"our first FAUVER *Automatic* CONVEYOR LUBRICATOR was installed in 1934" . . .

"the conveyor is 3700 feet long and goes through enamel ovens, so lubrication was a serious problem. Several types of lubricators were tried without success. We resorted to manual application of oil which was an expensive item. This was necessary because when a sufficient number of wheels froze, the chain would break, meaning a cessation of production . . . This Automatic Trolley Lubricator now keeps the wheels well oiled, the oil is applied in a mist so that it does not get on the enameled work and those former mechanical troubles are eliminated" . . . there are

***also* FAUVER AUTOMATIC GREASE**

Lubricators driven by contact with the trolley wheels; operates on wheels equipped with or without Grease fittings—we specialize in conveyor lubrication problems—send for complete information . . .

J. N. FAUVER COMPANY, INC.

43 W. Hancock DETROIT 1.

For more details circle NED-7637 on enclosed inquiry slip

MIDGET IMPACT PRESS
bench unit delivers 1-ton blow

Capable of delivering a 1-ton impact every 1/6-second if desired, Benoit Mighty Midget impact press is built for cutting, crimping, riveting, marking, stamping, perforating and subassembly work. Solenoid operated on any 110-v circuit, bench press is actuated by Microswitch located under right side of base. Plunger will not repeat. An adjusting screw controls depth. Optional equipment includes foot switch, two switches to make operator use both hands to complete cycle and Variac control unit to adjust amount of impact. Made by **Peacock Metal Products, Inc.**, Dept. S, 752 Hyde Park Ave., Hyde Park 36, Mass.

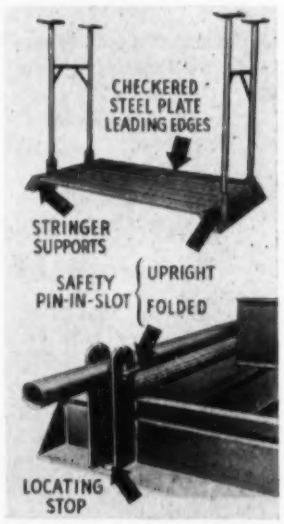
For more details circle NED-7638 on enclosed inquiry slip

WATERPROOF CLOTH LABELS
in rolls up to 2 in. wide

Coding, instruction and warning labels of pressure-sensitive waterproof cloth type are available in rolls up to 2160 in. long and up to 2 in. wide. Applied during assembly, white tape can be printed in one or two colors. Waterproofed cotton fabric is backed with waterproof white pressure-sensitive adhesive which retains grip while immersed in water. The TFS-11 tape is also resistant to many acids and alkalies and can be used outdoors. Made by **Topflight Tape Co.**, Dept. MK, 116 E. Market St., York, Pa.

For more details circle NED-7639 on enclosed inquiry slip

STACKING PALLET UNIT
for tiering odd-shaped items



Improvements in Multi-Stak pallet stacker unit include self-contained locking device for vertical standard rigidity. Safety pin-in-slot arrangement permits standards to be set up by one person. Ends of standards nest over raised locating stops on stringers to insure positive locking in upright position. For safe tiering of crushable, irregular, odd-shaped or mixed items, collapsible stacking unit is made in several sizes for bulk and height, and has unit capacity of 4000 lb and stacked static capacity of 20,000 lb. It can be safely tiered as high as fork lift truck or ceiling will permit. No weight rests on stored material itself. When not in use, supporting standards fold across top of pallet for compact storage. It can also be used for temporary shelving. Made by **Elizabeth Iron Works, Inc.**, 508 Green Lane, Elizabeth B, N. J.

For more details circle NED-7640 on enclosed inquiry slip

UNIVERSAL ENGINEERING CO.

FRANKENMUTH 5, MICHIGAN

For more details circle NED-7641 on enclosed inquiry slip

step up production with

STOW flexible shaft MACHINES

These dependable STOW FLEXIBLE SHAFT MACHINES save production time . . . speed up output . . . help lower production costs. Variable Speed Models shown are easily portable . . . cut down operator fatigue and increase on the job efficiency!

Constant Speed Models available. Also complete line of accessories designed to increase the utility of STOW Flexible Shaft Machines!

WRITE TODAY

for your free copy of CATALOG 51

STOW MANUFACTURING CO.

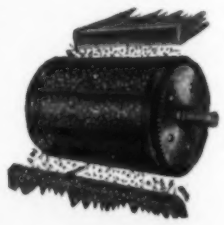
26 Shear St. Binghamton, N. Y.

For more details circle NED-7642 on enclosed inquiry slip

HOMER PERMANENT non-electric MAGNETIC DRUMS and DUCTS for AUTOMATIC REMOVAL of TRAMP METALS

HOMER Magnetic Ducts for the removal of tramp iron from Air or Gravity conveyed Grains, Textile and Chemical materials, etc. These units are used with almost any type of processing machinery.

HOMER Magnetic Drums for removal of tramp iron from fine or pulverized dry products, as, Foods, Chemicals, Plastics, Paint Pigments, etc. These units can be used with chutes, hoppers, screw or belt conveying machinery.



Pat. Pending

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The HOMER MANUFACTURING CO., Inc.

Dept. I-25 LIMA, OHIO

Producers of Magnetic Separator Equipment Since 1923

For more details circle NED-7643 on enclosed inquiry slip

Now... it's the **WRIGHT ARMY TYPE SAFEWAY**

A steel hand hoist with compact, adjustable suspension and trolley

LONGER-LIFE FEATURES

- Steel in all load-supporting parts
- Load sheaves with five formed pockets
- Alloy Steel load chain
- Swiveling drop-forged load hook
- Alloy steel, machine cut gears
- Fully enclosed, self-oiling gear case

Write for Bulletin DH-269

ACCO York, Pa., Chicago, Denver, Detroit, Los Angeles, New York, Philadelphia, Pittsburgh, Portland, San Francisco, Bridgeport, Conn.

WRIGHT HOIST DIVISION
AMERICAN CHAIN & CABLE

In Business for Your Safety

"Internationally Better" HOISTS TROLLEYS CRANES

For more details circle NED-7644 on enclosed inquiry slip

FASTER-SIMPLER

POSITIVE ANGULAR ACCURACY

the MAGNA-SINE

For any angular set-up, whether single or compound, simply insert standard gauge blocks between the Magna-Sine plates. Proper gauge blocks are indicated in the Robbins Table of Constants. Positive accuracy in a few moments. Work is securely held by magnetic attraction. In two models and sizes; also non-magnetic models for inspection set-ups.

SEND FOR CATALOG

OMER E. Robbins COMPANY

Manufacturers of the MAGNA-SINE and Other Precision Tools

5722 TWELFTH ST. • DETROIT 8, MICH.

For more details circle NED-7645 on enclosed inquiry slip

BURNDY • BURNDY • BURNDY • BURNDY

one does it!

VERSITAP CONNECTOR

Can be used as a tee, tap, cross or end-to-end connector. Each size takes a convenient range of cable combinations. Compact, no bolts protruding, all edges rounded, easy to tape. Stocked by your Burndy Distributor.

BURNDY ENGINEERING CO., INC.
NEW YORK 54, NEW YORK

For more details circle NED-7646 on enclosed inquiry slip

THE NIBBLEX

even cuts CORRUGATED SHEET METAL as clean as a whistle!

NO SHEARING ACTION - BUT

A NEW PRINCIPLE OF A DIE and PUNCH

No Bending • No Burrs • No Rough Edges

The NIBBLEX may be powered with any ¼" electric or air drill or flexible cable. It may be used for cutting sheet metal (up to 20 gauge) at the rate of 7 to 15 feet per minute. A very valuable tool for all the metal working trades—yet priced to sell at a low $13.75.

Nord INTERNATIONAL CORPORATION

50 CHURCH STREET, NEW YORK 7, N.Y.

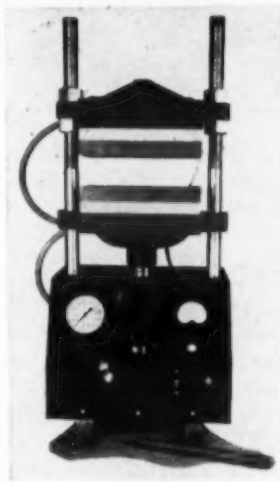
For more details circle NED-7647 on enclosed inquiry slip

VERTICAL MILLING HEAD for horizontal milling machine use

Angle boring and milling operations can be performed on horizontal milling machines when this vertical milling head is used. Universal tool has micrometer vertical quill spindle feed calibrated in 0.001-in. Vertical spindle travel is 1¾ to 3 in. Ground thread micrometer lead screw has bronze stud for spindle end thrust support with set screw takeup adjustment. Gear housing is semisteel. Preloaded ball bearings and hardened and ground spiral and helical gears are incorporated. Gear rating is 1½ to 15 hp. Any of 25 models available for every make and size horizontal milling machine can be supplied with or without micrometer. Made by **Brown Mill-Tool Co.,** 5475 San Fernando Rd. W., Los Angeles 39, Calif.

For more details circle NED-7648 on enclosed inquiry slip

LABORATORY PRESS hydraulic model has 6-in. stroke



Gage mounted on control panel of 12-10 hydraulic laboratory press indicates pounds per square inch on ram which delivers pressures up to 24,000 lb. Stroke is 6 in. and maximum daylight opening is 10 in. Longer columns for more opening can be supplied. Platens measure 7 x 10 in. and width between columns is 11 in. Heating platens can be removed. Bimetallic type of temperature regulator and relayed load method is used in construction. Temperature indicator is millivoltmeter calibrated in degrees Fahrenheit. Extraction cages and braking and compression accessories can be attached. Models are offered for 110-115-v or 220-230-v ac operation. Made by **Wabash Metal Products Co.,** Hydraulics Div., Dept. NED, 1568 Morris St., Wabash, Ind.

For more details circle NED-7649 on enclosed inquiry slip

DO YOU KNOW? Practical ways to prevent accidents and fires in industrial plants are presented in new 800-page "Accident Prevention Manual for Industrial Operations." Written and edited by safety experts, book is thoroughly indexed. Reprints of various sections dealing with specific safety problems are available separately for use by supervisors, crew leaders and others in the foremanship group. Detailed description and prices can be obtained from the National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill.

For more details circle NED-7650 on enclosed inquiry slip

SOLVE YOUR SCRATCH AND Abrasion Resistance PROBLEMS

TWO MODELS
Laboratory Std. $650
Portable $475

"We knew our product was good but we didn't know HOW GOOD until we got our Taber Abraser." This is typical of reports we receive constantly from new owners of this practical scientific instrument. Accurately measures the scratch and abrasion resistance of metals, plastics and paints. Also leather and fabrics. Instrument simulates actual wearing conditions during test and gives result in numerical index.

Send for FREE FOLDER

Taber INSTRUMENT CORPORATION
110 GOUNDRY ST., NORTH TONAWANDA, N. Y.

For more details circle NED-7651 on enclosed inquiry slip

ZIP OFF

SCALE
RUST
PAINT
with AURAND CLEANING TOOLS

AURAND rotary chipping action quickly, easily, thoroughly removes scale, paint, rust, and other accumulation from any hard surface. Renewable cutter heads and fool-proof cutting depth adjustment allow the unskilled operator to produce perfectly clean surfaces. Available in electric or pneumatic models. Write today for further information on cleaning your iron, steel, brick, concrete, and other hard surfaces.

Get the time and money-saving facts

WRITE TODAY TO DEPT. 14

AURAND MFG. & EQUIP. CO.
2643 Colerain Avenue • CINCINNATI, OHIO

For more details circle NED-7652 on enclosed inquiry slip

SHOCK ABSORBERS for Electrical Assemblies

THOMPSON shock absorbers provide shockproof mounting and long service life for lighting fixtures, meters, fans, unit heaters, motors, instrument panels, process controls, etc. These durable spring-loaded units permit angular as well as vertical movement to assure maximum vibration absorption.

Utilizing threaded connections for ease of installation, THOMPSON shock absorbers have only four component parts: malleable cast iron bell-shaped body, open spring plate, stem, and a powerful steel spring. All parts are treated for corrosion resistance. In addition, unit's design prevents damage to conductor wires and assures complete safety in event of spring failure.

Light and heavy-duty models are available in range of sizes to support loads up to 80 pounds.

FOR COMPLETE DATA, WRITE TODAY FOR CATALOG NO. 50

311-TE

THE THOMPSON ELECTRIC CO.

1138 Power Avenue • Cleveland 14, Ohio

For more details circle NED-7653 on enclosed inquiry slip

QUICK, EASY WAY TO STOP LEAKS

Dry Up DAMP, CLAMMY BASEMENTS!

Leaks in concrete walls, masonry, cinder block, etc., can be stopped quickly with FLEXTITE. Actually seals against water pressure. Efficient as a trowel coat for sealing off water and dampness. Transforms leaky basement walls into dry surfaces. Used in elevator pits, tunnels, dams, tanks, retaining walls, etc. (Minimum quan. 6 gal.)

MAIL COUPON for TRIAL OFFER

FLEXTITE

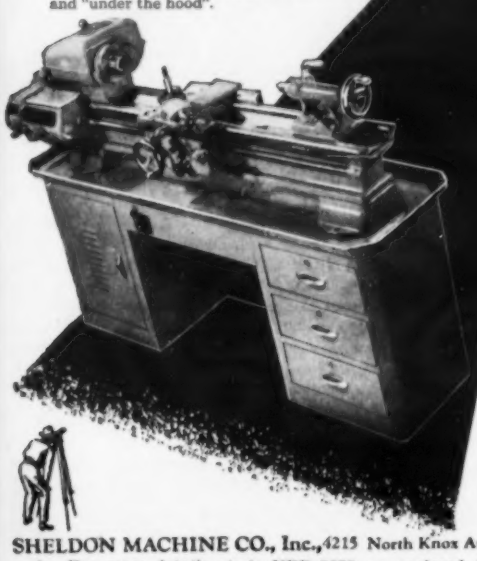
FLEXROCK COMPANY
3603-F Filbert St., Philadelphia 4, Pa.
Offices in Principal Cities
Please send me complete FLEXTITE information and details of TRIAL ORDER PLAN—no obligation.
Name .....
Company .....
Address .....

For more details circle NED-7654 on enclosed inquiry slip

SHELDON
CHICAGO

A better Lathe from any angle

Judge it from any angle: for accuracy, stamina, rigidity or capacity (for size). Check its component parts—its spindle, spindle bearings, lead screw, apron, carriage, bed, gearing, or the power delivered by its drive—you will find the SHELDON Lathe a quality tool both in appearance and "under the hood".



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SHELDON MACHINE CO., Inc., 4215 North Knox Ave., Chicago 41, Ill.

For more details circle NED-7655 on enclosed inquiry slip

Over 85% of the torque wrenches used in industry are

STURTEVANT TORQUE WRENCHES

Read by Sight, Sound or Feel

- Permanently Accurate
- Practically Indestructible
- Faster—Easier to use
- Automatic Release
- All Capacities

in inch ounces ...inch pounds ...foot pounds (All sizes from 0-6000 ft. lbs.)

Every manufacturer, design and production man should have this valuable data. Sent upon request.

P.A. STURTEVANT CO. ADDISON QUALITY ILLINOIS

For more details circle NED-7656 on enclosed inquiry slip

TESTING EQUIPMENT
FOR BETTER MAINTENANCE

Test electrical equipment for shorts, grounds and insulation condition with the Acme Insulation Breakdown Tester. Provides secondary voltages ranging from 500 to 2500 volts. Permits testing under U.L. Standards, (double rated voltage plus 1000). Heavy duty testing prongs. Plugs into any 115 volt AC supply line. Write for Bulletin.

VOLTROL

A portable, manually operated voltage control providing stepless regulation from 65 to 135 volts. Other models for panel mounting or portable give range from zero to 135 volts. Bulletin on request.

ACME ELECTRIC CORPORATION
3010 WATER STREET CUBA, N. Y.

Acme ACME Electric

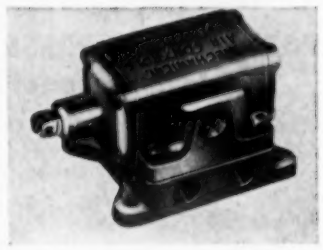
For more details circle NED-7657 on enclosed inquiry slip

HORIZONTAL BELT CONVEYOR
speeds assembly and inspection

Systematic handling of goods during assembling, inspection, sorting, order packing and similar operations is afforded by this Rapidstan Table-Veyor. Lengths can be varied from 10 to 60 ft by adding or removing 5-ft sections. Belt widths of 10, 12, 16, 18 or 20 in. can be supplied, and side leaves can be mounted on either side of belt to increase table working space. Height is adjustable from 21 to 40 in. above the floor, and conveyor can be permanently installed or furnished with casters for portable use. Fixed or variable speed drive can be used to give any desired belt speed from 5 to 100 fpm in either or both directions. Power is supplied by 1/3-hp single or three phase motor. Made by **Rapids-Standard Co.**, Dept. TV, 342 Rapistan Bldg., Grand Rapids 2, Mich.

For more details circle NED-7658 on enclosed inquiry slip

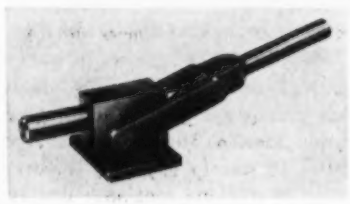
PRESSURE OPERATED VALVES
cam operated and air pilot types



Available for straightway, three-way and four-way applications up to 150 psi air pressure are cam operated and air pilot pressure operated valves, offered in ⅜ and ¾-in. sizes. Interchangeability of retainer or end cap construction for selection of control type is featured. Removal of four cap screws from basic valve assembly allows choice of operation by cam, pilot pressure, foot, solenoid or hand. Valves have bronze bodies and retainer caps with lapped and hard chromed bores. O-ring seals mounted on aluminum alloy piston provide instantaneous positive seal when in contact with body bores. All types are made to J.I.C. specifications and have cast iron sub-bases so that piping need not be disturbed for maintenance. Units can be arranged for double cam control, double pilot control or single control with spring return. Available from **Mechanical Air Controls**, 15313 W. Eleven Mile Rd., Royal Oak, Mich.

For more details circle NED-7659 on enclosed inquiry slip

HEAVY DUTY TOGGLE CLAMP
constructed of solid bar stock



Large No. 132-A push type toggle clamp is heavy duty unit for use in production of such large heavy items as planes, tanks and trucks. Plunger has 1-in. diameter, 2½-in. stroke and ultimate load of 10,000 lb. Ground plunger and broached guide hole permit accurate locating as well as clamping operations. Made by **Wolverine Tool Co.**, 1486 E. Woodbridge St., Detroit 7, Mich.

For more details circle NED-7660 on enclosed inquiry slip

... the new separable

FLEXCO HINGED BELT FASTENERS

U. S. Patent No. 2,477,855

- For joining grader, trencher, ditcher and other earth moving conveyor belts.
- For belts ⅜" to ½" thick.
- A FLEXCO fastener that is HINGED. Has removable hinge pin.
- Troughs naturally, operates through take-up pulleys.
- Strong, durable . . . pull or tension is distributed uniformly across joint.

Order From Your Supply House. Ask for Bulletin HF 500.

FLEXIBLE STEEL LACING CO
4664 Lexington St., Chicago 44, Ill.

For more details circle NED-7661 on enclosed inquiry slip

AB 103

Slipping accidents cut into production . . . and profits! Economical American Abrasive safety floorings and treads do a vital job at low cost. How much can you save with safety?

FREE FACT FOLDER on safety floorings gives you the answer. WRITE TODAY.

AMERICAN ABRASIVE Safety Floorings

AMERICAN ABRASIVE METALS CO., IRVINGTON 11, N. J.

For more details circle NED-7662 on enclosed inquiry slip

...this STAR gives OUTSTANDING PERFORMANCES

LOVEJOY FLEXIBLE COUPLINGS

Lovejoy Flexible Couplings do a better job of correcting for misalignment and counteracting vibration, shock, backlash and surge. Free-floating load cushions are suspended between heavy metal jaws . . . last two to five years before changing. No lubrication ever needed on Lovejoy Flexible Couplings.

Write for complete Lovejoy Catalog and Quick-Finding Selector Charts.

LOVEJOY FLEXIBLE COUPLING CO.
5003 W. Lake Street Chicago 44, Illinois

Also Mfrs. of Lovejoy Universal Joints and Lovejoy Variable Speed Transmissions

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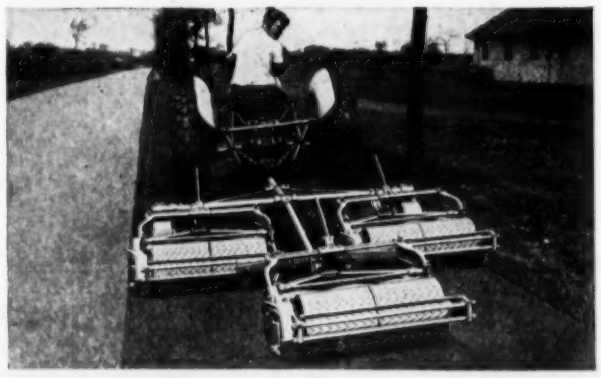
Cut Mowing Costs
WITH ROSEMAN GANG MOWERS



REDUCE COST—IMPROVE APPEARANCE—SAVE LABOR

ROSEMAN ROLLER DRIVE MOWERS answer reduced maintenance budgets and increasing labor costs. The ability to mow lawns and unkempt areas more quickly, economically, and at the same time develop a smoother and better turf, are ROSEMAN Mower features. Will give maximum operating efficiency under the toughest conditions. Non-breakable construction assures years of trouble-free service.

Available in 3, 5 and 7 gangs. Attaches to any tractor. Also made in Lift Type Model for Ford-Ferguson tractors.

Wire, Write or Phone for Literature and Prices.

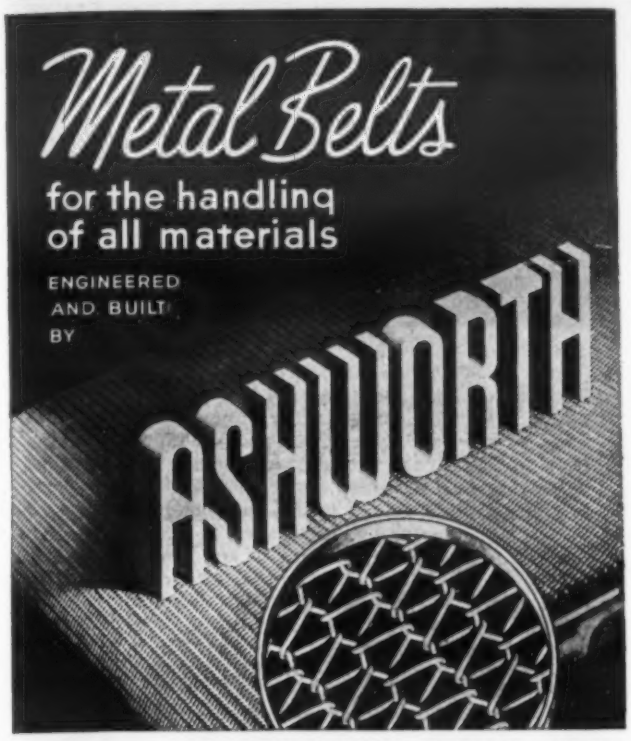
TIMKEN BEARING EQUIPPED

ROSEMAN MOWER CORP.: Phone UNiversity 4-1842 Evanston, Illinois

Manufacturers of Gang Mowers for fine lawns, golf courses and airfields since 1916

ROSEMAN HOLLOW ROLLER MOWERS

For more details circle NED-7664 on enclosed inquiry slip



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ASHWORTH BROS., INC.
METAL PRODUCTS DIV. • WORCESTER, MASS.

Sales Engineers located in Buffalo • Chattanooga • Chicago • Cleveland • Detroit • Los Angeles • New York • Philadelphia • Pittsburgh • Seattle

Canadian Rep., PECKOVER'S LTD. - Toronto - Montreal - Halifax - Winnipeg - Vancouver

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YOU CAN TAKE IT WITH YOU!

BECKER
Self-Contained
SPRAY GUN
PRESSURE-POWERED
with
INEXPENSIVE
CO2
CARTRIDGE

This *completely* portable spray gun is saving money in many industrial uses. Excellent for maintenance operations. Requires no compressor, motor, or electrical outlet. Has 21 liquid ounce capacity, heavy-gauge, steel container; cast aluminum head; brass and stainless steel inserts. Low cost CO2 cartridge sprays up to one container full, depending on viscosity. Use it for paint, varnish, enamel, oil, fire-proofing, rust-proofing, disinfecting. If your industrial distributor can't supply you, order direct and we will ship postpaid. (Extra CO2 cartridges 10 for $1, postpaid, or buy them from your local dealer.)

ONLY $15.95 *with three cartridges*

SULLIVAN BECKER CO., DEPT. 171-K, Kenosha, Wis.

For more details circle NED-7666 on enclosed inquiry slip

ACCO SLING CHAIN *Adjuster*
FOR UNBALANCED LOADS

Pat. No. 2,436,247
a New Idea!

Now any load can be lifted the easiest way it can be picked up. And perfect balance is maintained every time.

Sling hooks are attached to load, saddle moved to correct position along chain's links which fit in pockets of the ACCO SLING CHAIN ADJUSTER. Then load is ready for lifting. Twisting or spiking of chain is unnecessary. Made for ½", ⅝", ¾" and ⅞" chain.

Adds greater safety on level lifts — Prevents slippage on angle lifts — Provides control of unbalanced lifts

SEE your AMERICAN CHAIN distributor or write us for full information

ACCO York, Pa., Atlanta, Chicago, Denver, Detroit, Los Angeles, New York, Philadelphia, Pittsburgh, Portland, San Francisco, Bridgeport, Conn.

AMERICAN CHAIN DIVISION
AMERICAN CHAIN & CABLE
In Business for Your Safety

"Internationally Better" SLING CHAINS

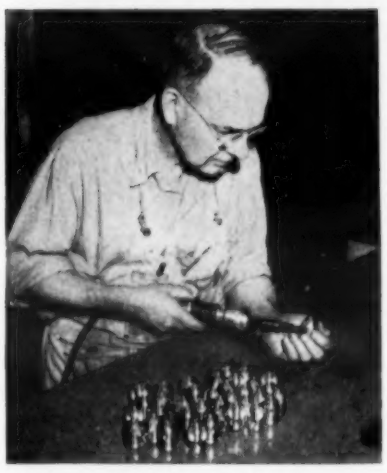
For more details circle NED-7667 on enclosed inquiry slip

BENCH TYPE PARTS CLEANER
solvent flows through brush

Oil grease and dirt are brushed and flushed away with Brush-Flush parts cleaner which features hollow handle brush attached with tube to pump to produce flow of solvent at end of bristles. Parts are cleaned on screen platform which captures flushed off dirt. Small particles passing through screen are retained by second filter screen located at pump intake. This bench type unit will plug into any 115-v outlet. Nylon bristles are available. Made by **Graymills Corp.**, 1973 Ridge Ave., Evanston, Ill.

For more details circle NED-7668 on enclosed inquiry slip

PNEUMATIC THREAD GAGE
for 0.059 to 2.510-in. threads



Consisting of air motor with friction clutch and gage adapter, this pneumatic thread gage uses standard taper-lock plug gages. Pressing tool spins motor and drives "go" gage into hole; pull reverses motor and backs gage out. The 34-oz unit can be suspended over work area by work balancer if desired. For inspection of small parts it can be vertically or horizontally bench mounted. Foot valve allows use of both hands. Air motor turns gage at speeds up to 300 rpm, depending upon speed set on built-in regulator. Variable friction clutch permits gage to stop without stalling motor and prevents jamming of gage. Adapter is furnished for gages with thread diameters from 0.510 to 0.825-in. Other adapters handle sizes from 0.059 to 2.510 in. Made by **Keller Tool Co.**, Dept. N, Grand Haven, Mich.

For more details circle NED-7669 on enclosed inquiry slip

DO YOU KNOW? A new Komac premix, unlike present materials used for patching roads, can be applied in any kind of weather, can be stockpiled in readily usable form throughout the winter and laid down without heating, using standard road-repair equipment. Material is merely tamped or rolled into holes in pavement, and it can carry traffic immediately after it is rolled. Now offered for patching, Komac will soon be available for paving complete roads. Made by Koppers Co., 1146 Koppers Bldg., Pittsburgh 19, Pa.

For more details circle NED-7670 on enclosed inquiry slip

NOW — Precision Balls of Synthetic Sapphire

These balls of synthetic sapphire, polished to within 20 micro-inches of sphericity, are resistant to wear, heat, and corrosion. In many applications they need not be lubricated.

Available in 1mm, 1/16 inch, ⅛ inch, and ¼ inch sizes, and in three surface finishes.

PROPERTIES

Coefficient of Friction	0.140
Hardness (Knoop)	1525-2000
Dielectric Constant	7.5-10
Modulus of Rigidity	21.5-27.5 x 10^6psi
Thermal Coefficient of Expansion at 50°C (per°C x 10^6)	5.0-6.7
Chemical Resistance	Unaffected by acids, dilute alkali.

Call or write any LINDE office for information on these balls or the other forms of synthetic sapphire.

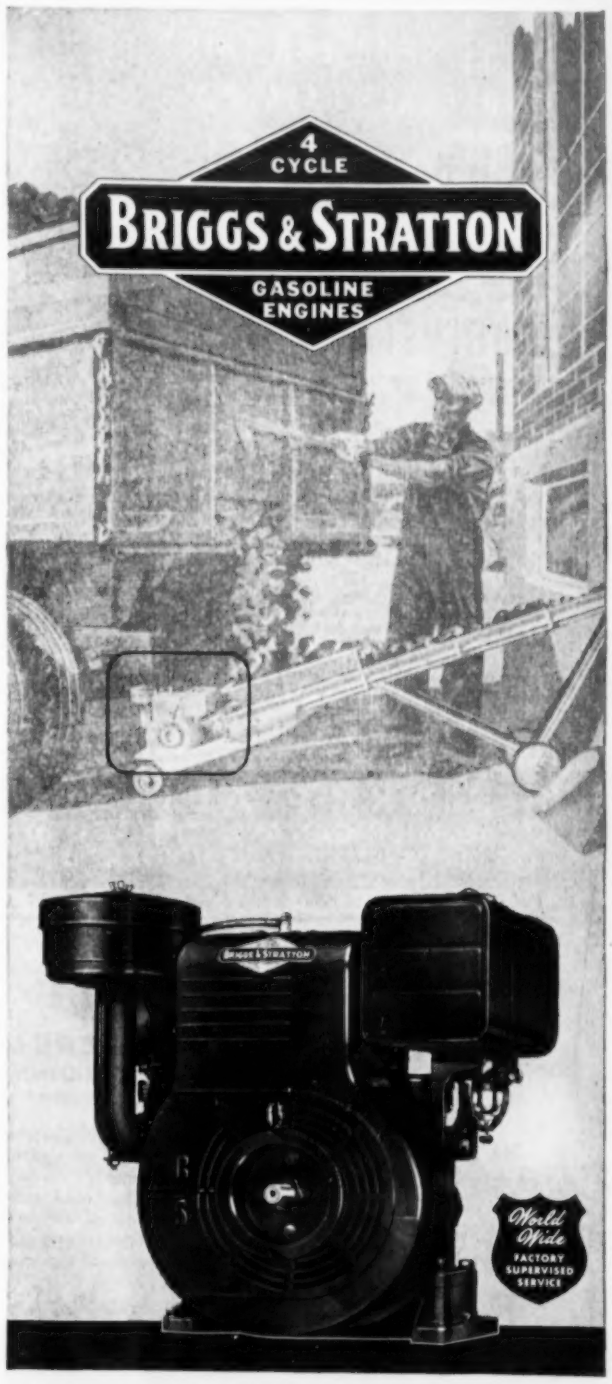
LINDE AIR PRODUCTS COMPANY
A Division of Union Carbide and Carbon Corporation
30 East 42nd St. UCC New York 17, N. Y.
In Canada: Dominion Oxygen Company, Limited, Toronto

For more details circle NED-7671 on enclosed inquiry slip

GENERAL BOX COMPANY ..
★★★★★ *engineered shipping containers*

GENERAL OFFICES: Illinois & Dearborn Sts., Chicago 10, Ill.
DISTRICT OFFICES AND PLANTS: Cincinnati, Denville, N.J., Detroit, East St. Louis, Kansas City, Louisville, Milwaukee, Sheboygan, Winchendon. Continental Box Company, Inc., Houston, Dallas General Box Company of Mississippi, Meridian, Miss.

For more details circle NED-7672 on enclosed inquiry slip



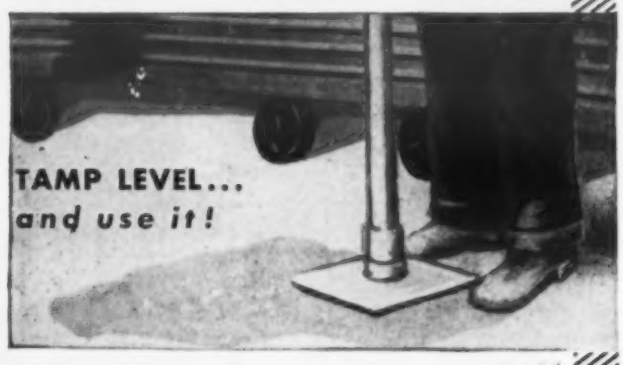
Preferred power for portable conveyors, too — the world's most widely used single-cylinder 4-cycle, air-cooled gasoline engines on machines and tools for industry, construction, railroads, and on appliances and equipment for farm and home.

There is a Briggs & Stratton engine service organization, factory trained and supervised, near you — with a stock of genuine Briggs & Stratton parts for all models. The Briggs & Stratton service organization network is the largest of its kind in the world. Briggs & Stratton Corporation, Milwaukee 1, Wisconsin, U. S. A.

In the automotive field Briggs & Stratton is the recognized leader and world's largest producer of locks, keys and related equipment.

For more details circle NED-7673 on enclosed inquiry slip

NOW . . . live rubber added to INCREASE STRENGTH 200%



IMMEDIATE-SET
FLOOR PATCH

The highly resilient, "fighting-back" quality of rubber triples the resistance of IMMEDIATE-SET to point loads, impact and shock. At sub-freezing temperatures the increase is much greater. For inside or outside use.

This is an entirely new idea. Results are amazing. Try it and be convinced.

WRITE FOR COMPLETE DATA TODAY

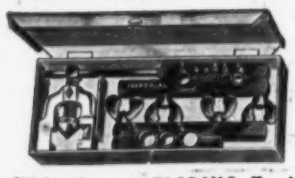
FLASH-STONE CO.
INCORPORATED
32 E. RITTENHOUSE STREET
PHILADELPHIA 44, PA.

For more details circle NED-7674 on enclosed inquiry slip

WE'LL SEND YOU THIS WHOLESALE CATALOG FREE!

60% SAVINGS ON SOME ITEMS

OVER 9,000 ITEMS including



Wide Range FLARING Tool
Flares 9 different sizes. One bar flares 1/8", 3/16", 1/4", 5/16", 3/8" and 7/16" OD sizes and the second bar flares 1/2", 5/8" and 3/4". Yoke has "slip on" feature with the inside edges notched to hold in place. Self-centering No. 13564B. Complete Wide Range Flaring Tool for 9 different sizes, in metal case.

ELECTRIC MOTOR PARTS
REFRIGERANTS & FITTINGS
DEEP FREEZER SUPPLIES
DEHYDRATORS
COPPER TUBING
VALVES
CONTROLS
HIGH SIDES
GAUGES
TOOLS

WRITE TODAY TO

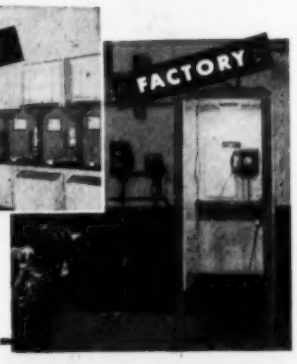
THE HARRY ALTER CO.
1726 S. MICHIGAN AVE., CHICAGO 16
132 LAFAYETTE ST., NEW YORK 13

For more details circle NED-7675 on enclosed inquiry slip

FOR QUIET TELEPHONING

—ANYWHERE
USE A BURGESS-MANNING ACOUSTI-BOOTH

Thick walls of sound-absorbing material soak up noise. You can hear easily . . . talk comfortably in noisy surroundings. Suited to any location. Modern in appearance. Wall and floor models.



ALSO
- Stores
- Bus Terminals
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MAIL COUPON FOR FREE BULLETIN

Burgess-Manning Company, *Architectural Products Division*
5970-C Northwest Highway, Chicago 31, Illinois

Please send booklet describing Burgess-Manning Acousti-Booths.

Name_____
Firm Name_____
Street—City_____

For more details circle NED-7676 on enclosed inquiry slip

ELECTRIC DEHUMIDIFIER filters and dries room air

Humidity in rooms up to 8000 cu ft in size can be reduced without increasing temperature with Raymond Loewy-styled electric dehumidifier. In operation, four-bladed, 8½-in. diameter suction fan powered by 1/250-hp motor draws room air through permanent filter at rate of 165 cfm. Sealed, rotary Meter-Miser compressor of ⅛-hp supplies refrigeration to cooling coils. Moisture condenses and collects on coils then drops into drawer-type, 22-pt porcelain container or into permanent drain. Unit works effectively between 60 and 95° F with relative humidity of 50 per cent or above. Compressor and fan motor operate on 115-v, 50/60-cycle current. Overall size is 18¼ in. high, 20½ in. long and 11¾ in. wide. Made by **General Motors Corp.**, Frigidaire Div., 1509 Amelia St., Dayton 1, O.

For more details circle NED-7677 on enclosed inquiry slip

PHOTOGRAPHIC RECORD COPYER makes up to 150 exposures per hour

Using precut paper, Dexigraph office photocopying machine photographs documents at any reduction from 100 to 50 per cent of original size on continuous percentage scale. New lens assembly, smaller than previous model, assures sharp reproduction. Lens works in conjunction with first-surface coated mirror. Up to 150 exposures per hour can be made by synchronized operation of electric timer and solenoid shutter. Each exposure is automatically recorded by reset counter. Green fluorescent lamps furnish copy illumination. Made by **Remington Rand Inc.**, Management Controls Div., Dept. NED, 315 Fourth Ave., New York 10, N. Y.

For more details circle NED-7678 on enclosed inquiry slip

DO YOU KNOW? Complete elimination of porosity in metal alloy castings and glass fiber laminates is possible with Weseco impregnation process. Treatment is now available on a 12 to 24-hour custom service basis in 30 of the major industrial areas. Applicable before or after final finishing coats, method can be used on machined or rough parts. Resultant seal is resistant to wide temperature range, chemicals and solvents. It has high dielectric strength. Full information available through Western Sealant, Inc., 9042 Culver Blvd., Culver City, Calif.

For more details circle NED-7679 on enclosed inquiry slip

how much better can

better SPRAY NOZZLES be?

The very least you can expect from Spraying Systems Spray Nozzles is lower overall nozzle cost. But you can also expect a lot more. Changeover to Spraying Systems Spray Nozzles repeatedly results in very substantial increases in spraying efficiency and accuracy. The reason is this: Spraying Systems' specialization in the design and manufacture of one type of product only . . . Spray Nozzles. As a first step in proof, let us send you our industrial spray nozzle catalogs.

SPRAYING SYSTEMS CO.
Engineers and Manufacturers
3211 RANDOLPH ST.
Bellwood, Illinois

WRITE FOR
Catalog No. 22
General Industrial Spray Nozzles
Catalog No. 23—Pneumatic Atomizing Nozzles

For more details circle NED-7680 on enclosed inquiry slip

TOUGH GRINDING JOBS Can be Easy

Truck mounted HC5 grinding casting.

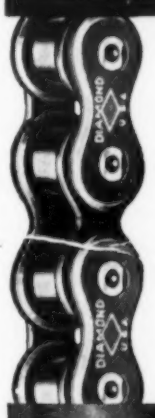
Because you only handle a light handpiece, not a heavy motor, Haskins Flexible Shaft Equipment can make fast work of those tough grinding jobs—with surprisingly little in labor cost. For this equipment is capable of delivering the sustained power needed for grinding castings, rough welded joints, sanding large areas or doing heavy scratch brush work.

Haskins has a complete line of attachments, too, for all grinding, sanding, filing or polishing operations . . . there's a unit to meet your specific requirements . . . do the job faster and more economically. Your choice of mounting—bench, truck or overhead. Write today for complete details. R. G. Haskins Co., 603 S. Washtenaw Ave., Chicago 12, Ill.

haskins HASKINS
FLEXIBLE SHAFT EQUIPMENT

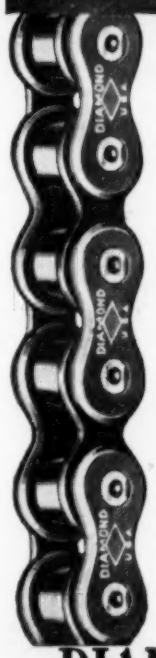
For more details circle NED-7681 on enclosed inquiry slip

HARNESS YOUR HORSEPOWER WITH



DIAMOND ROLLER CHAINS and STOCK SPROCKETS

Diamond Stock Sprockets come in a wide range of types and standard sizes to meet most Roller Chain Drive requirements.



FOR SMALL OR LARGE HORSEPOWERS—ALL SPEEDS

Compact, rugged and uniform in quality, Diamond Chains and Sprockets eliminate the troubles and delays of unnecessary adjustments and replacements. Because they are positive, speed ratios remain at 100% to insure maximum machinery output.

DIAMOND CHAIN COMPANY, Inc.
Dept. 457, 402 Kentucky Ave., Indianapolis 7, Ind.
Offices and Distributors in All Principal Cities

Refer to the classified section of your local telephone directory under the heading CHAINS or CHAINS-ROLLER

48-page Catalog 709. Complete selection data for Stock Sprockets and Roller Chains.

DIAMOND ROLLER CHAINS

For more details circle NED-7682 on enclosed inquiry slip

VERSATILITY on wheels!

You can't stump Stevedore, Jr.* with a tough job. This portable, power-driven belt conveyor is designed for all kinds of package and bag handling. Used alone or in combination with other conveyors, it is the most economical way to load or unload trucks or boxcars . . . move materials into balcony bins . . . or stack at a convenient height. Stevedore, Jr. can be easily rolled from job to job by one man. Available in 10" and 16" belts.

Write for prices and free catalog

The RAPIDS-STANDARD CO., Inc.
431 Rapistan Building
Grand Rapids, Michigan

Rapistan® CONVEYORS

*T. M.

Representatives in Principal Cities

CONVEYORS: *Power or Gravity, Movable or Fixed.*
Also a complete line of CASTERS & HAND TRUCKS

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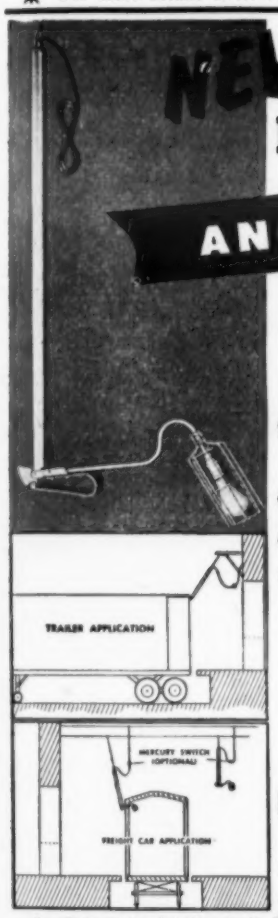

NEW PYLE-NATIONAL ANCHORLITE

THE SUSPENDED INSIDE AND UNDERSIDE ILLUMINATOR

For *Expediting* Loading of freight cars, trucks and trailers

- Self Retracting
- Self Anchoring & Adjusting
- Self Releasing

Saves man hours
Reduces maintenance and Replacement Costs
Reduces fire and accident hazards

Write for Anchorlite Bulletin

THE PYLE-NATIONAL COMPANY
1342 N. Kostner Ave. Chicago 51, Illinois
Agents and Representatives in the Principal Cities of the United States and Canada

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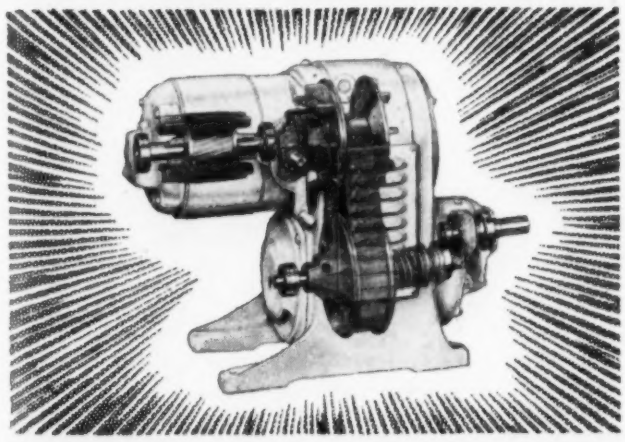
Miracle MOTOR STEPS UP PRODUCTION!



VARIDRIVE 2 TO 10,000 RPM

Varidrive will give your powered equipment any and every speed needed right up or down to a split rpm. No external gearing. Simply turn the control handle for instant speed selection. Increase production 10%, 20%, 30% or more. ¼ to 50 h.p. Ask for new U.S. Varidrive Bulletin.

US MOTORS

U.S. ELECTRICAL MOTORS Inc.
Box 2058, Los Angeles 54, Cal. or Milford, Conn.

▲ For more details circle NED-7685 on enclosed inquiry slip ▲

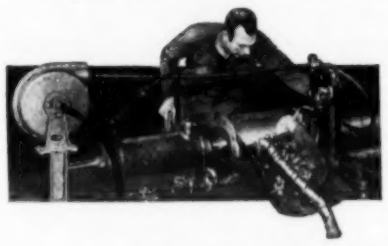
PORTABLE INFRARED OVEN
lamp spacing can be varied

Even heat is produced in portable caster base infrared ovens by having fewer lamps in upper part of unit and more in lower part. Ovens have asbestos insulation. Lamp spacing can be changed at any time, allowing user to change oven shape, even with equipment in operation. A number of units can be used side by side to provide a continuous oven. Units are 32 and 48 in. long, with any number of 8½-in. wide lamp rows available. Stands can be moved about readily. Made by **Wil-Son Mfg. Corp.**, Dept. NE, 700 Huston St., Cloverport, Ky.

▲ For more details circle NED-7686 on enclosed inquiry slip ▲

HOSE REEL
applies coolant on machining work

Water, fluid lubricants and coolants can be applied directly to work at point of tool contact when this hose reel is mounted on lathe or other machine tool and hose is attached to nozzle on cutting tool head. Hose feeds or retracts as required by movement of tool head, and hose is kept out of way. Reel is usable also to supply compressed air to pneumatic tools. Made by **Wayne Pump Co.**, 520 Tecumseh St., Ft. Wayne 4, Ind.



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COMMUNICATIONS PHONE
plug-in components quickly changed

Clear two-way talk over existing alternating or direct current plant circuits is possible with Femco Trolleyphone which operates by feeding FM carrier current into plant's power system. Transreceiver contains resistors and circuit packaged in ten component units which plug into octal sockets like radio tubes. Quick change or servicing is thus facilitated. Used in mines or in mills on traveling cranes, ore bridges, charging and coke oven machines and locomotives, system uses no signal wires. Set weighs 50 lb and consists of shock-mounted transreceiver in heavy case, loudspeaker and press-to-talk mircrophone. Made by **Farmers Engineering & Mfg. Co.**, Dept. G, 549 Brushton Ave., Pittsburgh 21, Pa.

▲ For more details circle NED-7688 on enclosed inquiry slip ▲

Complicated designs produced in

ONE AUTOMATIC OPERATION

Avoid waiting for scarce prefabricated materials; eliminate scrap loss. GRC delivers small parts faster, more economically. Simple or intricate parts produced in one automatic operation — completely trimmed, ready for use. 100,000 pieces to many millions.

Max. Wt.–½ oz.
Max. Lgth.–1¾"

Smallness Unlimited

Write, wire, phone for bulletin and samples; or send prints for quotations and delivery dates.

GRIES REPRODUCER CORP.
82 Willow Ave., New York 54 • MO 9-2476

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All Types . . .
All Sizes . . .
All Ratios in . . .

SPEED REDUCERS

We design and make every type of speed reducer . . . Worm, Herringbone, Spiral-Bevel, Spur, Planetary, etc. This is important because . . . 1. Assures unbiased recommendations . . . 2. Permits filling all needs from one source . . . 3. Places *responsibility* for satisfactory operation upon the shoulders of one *manufacturer*.

Complete catalogs on any type Reducer sent upon request on your Business Letterhead.

PHILADELPHIA GEAR WORKS, Inc.
Industrial Gears and Speed Reducers
Erie Avenue and G Street Philadelphia 34, Pa.
NEW YORK • PITTSBURGH • CHICAGO • HOUSTON • LYNCHBURG, VA.
In Canada: William and J. G. Greey, Limited, Toronto

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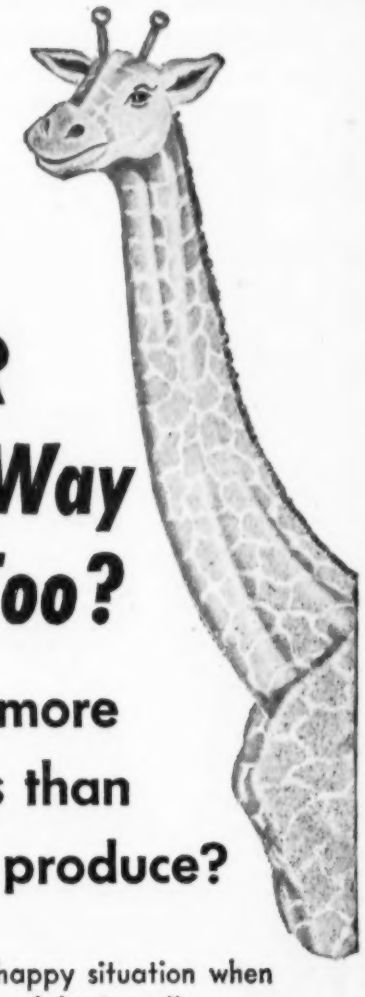


Is YOUR Neck Way Out, Too?

. . . with more business than you can produce?

Sounds like a happy situation when you say "too much business," but it sure isn't, as those of you know who are on that spot. And we're on it, too, since occasionally your requirements exceed our production. But . . . in an attempt to help you with your fastening problem, we've produced a TIME SAVER, shown below!

FREE—A-N Stainless Fastening Selector
This handy slide-chart instantly identifies A-N Nos. pertaining to stainless steel nuts, screws, bolts, rivets, cotter pins, washers; gives sizes and other data. Write for "Chart 51N" TODAY!

Anti-Corrosive Metal Products Co., Inc.
Manufacturers of STAINLESS STEEL FASTENINGS
CASTLETON-ON-HUDSON, NEW YORK

▲ For more details circle NED-7691 on enclosed inquiry slip ▲

NEW Sky-Blast POWER ROOF VENTILATOR

positive, economical, easily installed

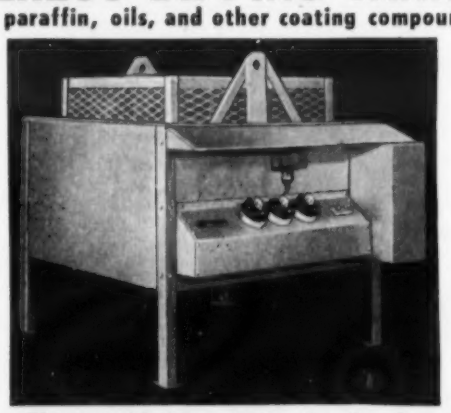
Propellair's new Sky-Blast Ventilator creates a powerful suction and exhaust to blow out heat, moisture, dust or fumes. Features include famous cast aluminum airfoil propeller, automatic butterfly dampers that will not leak, gun-barrel throat. Low, symmetrical silhouette cuts down roof stresses. Easily mounted.

Write for new Catalog N-680-D

PROPELLAIR
DIVISION OF ROBBINS & MYERS • INC
SPRINGFIELD • OHIO

For more details circle NED-7692 on enclosed inquiry slip

PERECO DIPPING TANKS
for paraffin, oils, and other coating compounds



also Electric Melting Pots for lead or tin

• Pereco offers a variety of sizes and designs of Electric Dipping Tanks (typical Model T-100 above) for coating operations. They save time; uniformly seal or protect many kinds of parts with hot liquid compounds. Fast, even heat-up is thermostatically controlled. Maximum 450° F. Tanks are completely equipped; ready to use. Pereco Electric Melting Pots for lead or tin dipping are available in two sizes: 250 and 400 lbs. of tin. Automatic temperature controller keeps heat at desired levels. Maximum 900° F. Send for full details today.

PERENY EQUIPMENT COMPANY COLUMBUS OHIO

PERENY EQUIPMENT CO.
Dept. G, 893 Chambers Rd., Columbus 12, Ohio
Export Dept.—The Inland Export Co., Inc., Greer Bldg., New Castle, Pa.

• STANDARD AND SPECIAL FURNACES FOR TEMPERATURES 450° TO 5000° F.

For more details circle NED-7693 on enclosed inquiry slip

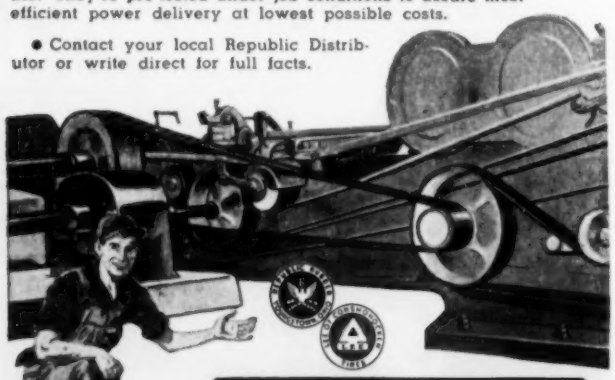
NOW EVEN MORE POWER EVEN LESS COST with REPUBLIC TRANSMISSION BELTING

• Get that added power for increased production with Republic Rubber's flexible, pre-stretched Transmission Belting.

Built with heavy, hard-woven, rubber-impregnated fabrics, with square or sealed edges and non-slip friction surfaces, Republic Belts are adaptable for duty on heavy industrial drives subject to shocks and stresses and on drives operating at high speeds over small pulleys.

Republic Transmission Belts are free from fastener trouble. They're pre-tested under job conditions to assure most efficient power delivery at lowest possible costs.

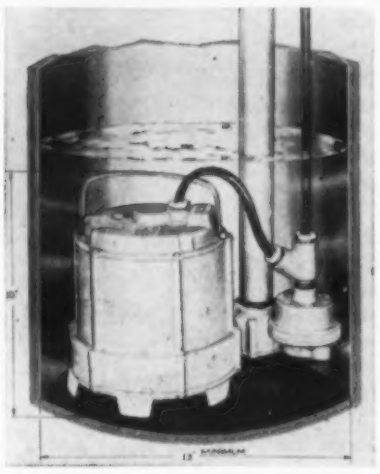
• Contact your local Republic Distributor or write direct for full facts.



INDUSTRIAL RUBBER PRODUCTS BY
REPUBLIC RUBBER DIVISION
Lee Rubber & Tire Corporation
YOUNGSTOWN, OHIO

For more details circle NED-7694 on enclosed inquiry slip

SUBMERSIBLE PUMP
overload protected unit has automatic liquid level switch

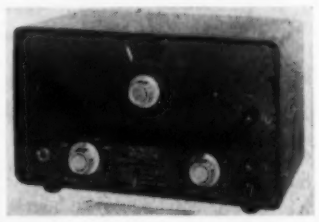


Water, silt or other debris cannot foul automatic liquid level control switch employed in this completely submersible utility pump. Uses for pump include sumps in boiler room pits, underground utility installations and elevator pits, pumping out excavations and draining tanks and vats. Switch turns on pump automatically when air pressure created by water rising in switch skirt activates starter. Low turn-off point of switch makes possible pumping to within ⅝-in. of bottom.

Motor is hermetically sealed in oil and requires no oiling or greasing. The 50-lb unit is installed in sump or tank without brackets. It measures 9½ in. high and has maximum diameter of 13 in. Of all bronze construction, pump has 3300-gph capacity delivered by 1/3-hp motor. Overload protected model P-109 A is both manual and automatic and can be manually started at any depth. After manual start, cord switch can be set to automatic position for automatic shut-off. Made by **Kenco, Inc.**, 1125 N. Ridge Rd., Lorain, O.

For more details circle NED-7695 on enclosed inquiry slip

LOW FREQUENCY OSCILLATOR
features low distortion and hum



Both sine and square wave voltages are provided simultaneously at any frequency between 0.35 and 52,000 cycles per second by model 420-A low frequency oscillator. Circuit arrangement eliminates tuning and band-switching transients. Low distortion and hum at any setting of calibrated output level control are features. Vernier tuning control and single scale logarithmic dial are incorporated. Use can be in servomechanisms, geophysical and seismological work and for vibration checks. Made by **Krohn-Hite Instrument Co.**, Dept. NED-1, 580 Massachusetts Ave., Cambridge 39, Mass.

For more details circle NED-7696 on enclosed inquiry slip

DO YOU KNOW? Awards totaling $2500 are being offered in the Merit Award Competition covering outstanding lighting installations. Open to those concerned with planning, recommending, installing and purchasing better lighting, this contest can be entered by obtaining official entry blanks and rule books from 4th International Lighting Exposition & Conference, Room 818, 326 Madison St., Chicago 6, Ill.

For more details circle NED-7697 on enclosed inquiry slip

FOOT SWITCHES

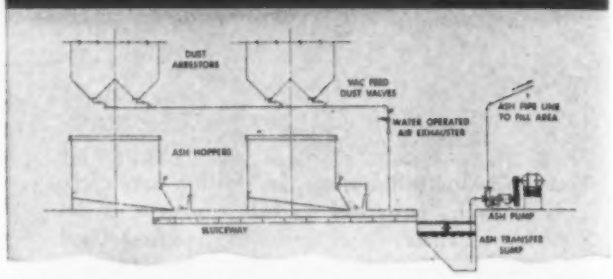
Approved by Underwriters' Laboratories

This line of rugged, versatile foot switches helps speed up production by eliminating time wasting, dangerous movements. The units can be supplied in several standard sizes or models. They can also be supplied to meet your special electrical requirements. Standard models are AC or AC-DC and ratings from ¾ of one amp. 125 Volts to 30 amp. 125 Volts—1 to 3 phase—, or 3 amp. 250 Volts to 15 amp. 250 Volts—1 to 3 phase—. Some models can be furnished single pole single throw, or double throw double pole. Complete line are Underwriters' approved.

PIONEER PATENTS & PRODUCTS CO.
P. O. Box 5982 Chicago 80, Ill.

For more details circle NED-7698 on enclosed inquiry slip

Need Large Capacity Ash-Handling?
CHECK WITH BEAUMONT ON A HYDRAULIC Ash-Handling System



A Beaumont HYDRAULIC System: is particularly suited for high capacity ash-handling; handles wet ash or dry, molten slag and large clinkers; fits any type of power plant arrangement; is completely enclosed, preventing dust or gas from escaping to the boiler room; and can be operated by one man on a part time basis.

Beaumont's Ash-Handling Division is competently staffed to give you expert recommendations on all types of ash-handling systems . . . and to provide and install the proper equipment to suit your particular requirements. Write today for the Beaumont brochure: "Answers to Your Ash-Handling Questions".

Beaumont BIRCH COMPANY
1514 RACE STREET • PHILA. 2, PA.
DESIGNERS • MANUFACTURERS • ERECTORS • BULK MATERIAL HANDLING SYSTEMS

For more details circle NED-7699 on enclosed inquiry slip

. . . with built-in blower
RCS SUPER SAW AIR COOLED

A Journeyman's Tool, built to stand up under constant, on-the-job Contractor or industrial use...

● NO STARTING HOLE NEEDED . . . Simply place guide next to material and "rock" tool into an upright position.

● CUTS RIGHT THRU IMBEDDED NAILS . . . wood, plaster, iron pipe, sheet metal, "Transite" and most other materials —even in cramped quarters.

● FITS HEAVY DUTY ¼" or 5/16" DRILL . . . as easy as changing bits! Overall length only 10¾"; weight only 3 lbs. 6 ozs.

● BUILT FOR CONSTANT DUTY OPERATION ..Built-in blower keeps Super-Saw cool even when used continuously and blows sawdust away from cutting line. Replaceable "Oilite", phosphor bronze and high speed ball bearings throughout. Write for Bulletin R10.

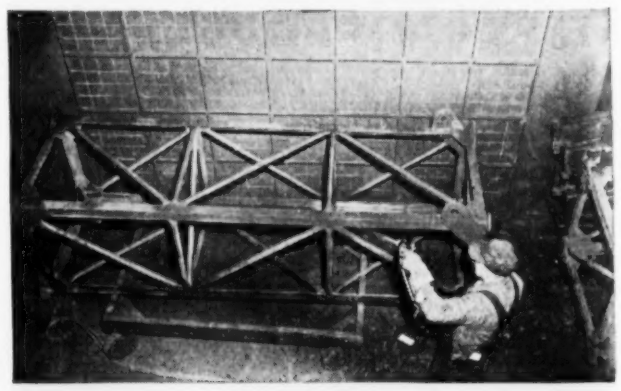
Cutting opening in oak flooring in less than 3 minutes — no starting hole needed!

Listed on Federal Supply Schedules. Class 40 Material.

R.C.S. TOOL SALES CORPORATION
JOLIET, ILLINOIS, U. S. A.

For more details circle NED-7700 on enclosed inquiry slip

WHO SAID PAINT OVERSPRAY REMOVAL WAS A PROBLEM?



This R-P Paint Arrestor Installation is Economical, Effective. Requires a Minimum of Floor Space

A wall of R-P Paint Arrestors and a blower solved the manufacturer's paint overspray removal problem in painting sections of structural steel in the installation above. Versatile R-P Paint Arrestors can be the economical solution for your plant, too.

WRITE FOR FREE BOOKLET

Helpful, informative suggestions to solve your paint spray booth problems. Write today.

RESEARCH PRODUCTS CORPORATION
Dept. N, Madison 10, Wisconsin

RP . . . PRODUCTS OF RESEARCH

For more details circle NED-7701 on enclosed inquiry slip

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PERMIT NO. 36
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Cleveland, Ohio

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Penton Building
CLEVELAND 13, OHIO

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COMPANY .....

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CITY ..... ZONE ..... STATE .....

Principal Products Manufactured .....

..... Approximate Number of Employees in Plant .....

Also send NEW EQUIPMENT DIGEST free to the following men in our company:

NAME ..... TITLE .....

NAME ..... TITLE .....

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Have You Filled In Your Name and Address?

FOLD TO THIS LINE

To obtain additional information on any items in this issue of NEW EQUIPMENT DIGEST, circle numbers below which correspond with those of desired items. Your request will be forwarded promptly to manufacturer. Please give your name, title, company and address. This postage-free mailer should be folded as indicated for mailing.

7550	7600	7650	7700	7750	7800	7850	7900	7950	8000	8050	8100	8150	8200	8250	8300	8350	8400	8450
7551	7601	7651	7701	7751	7801	7851	7901	7951	8001	8051	8101	8151	8201	8251	8301	8351	8401	8451
7552	7602	7652	7702	7752	7802	7852	7902	7952	8002	8052	8102	8152	8202	8252	8302	8352	8402	8452
7553	7603	7653	7703	7753	7803	7853	7903	7953	8003	8053	8103	8153	8203	8253	8303	8353	8403	8453
7554	7604	7654	7704	7754	7804	7854	7904	7954	8004	8054	8104	8154	8204	8254	8304	8354	8404	8454
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7556	7606	7656	7706	7756	7806	7856	7906	7956	8006	8056	8106	8156	8206	8256	8306	8356	8406	8456
7557	7607	7657	7707	7757	7807	7857	7907	7957	8007	8057	8107	8157	8207	8257	8307	8357	8407	8457
7558	7608	7658	7708	7758	7808	7858	7908	7958	8008	8058	8108	8158	8208	8258	8308	8358	8408	8458
7559	7609	7659	7709	7759	7809	7859	7909	7959	8009	8059	8109	8159	8209	8259	8309	8359	8409	8459
7560	7610	7660	7710	7760	7810	7860	7910	7960	8010	8060	8110	8160	8210	8260	8310	8360	8410	8460
7561	7611	7661	7711	7761	7811	7861	7911	7961	8011	8061	8111	8161	8211	8261	8311	8361	8411	8461
7562	7612	7662	7712	7762	7812	7862	7912	7962	8012	8062	8112	8162	8212	8262	8312	8362	8412	8462
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7564	7614	7664	7714	7764	7814	7864	7914	7964	8014	8064	8114	8164	8214	8264	8314	8364	8414	8464
7565	7615	7665	7715	7765	7815	7865	7915	7965	8015	8065	8115	8165	8215	8265	8315	8365	8415	8465
7566	7616	7666	7716	7766	7816	7866	7916	7966	8016	8066	8116	8166	8216	8266	8316	8366	8416	8466
7567	7617	7667	7717	7767	7817	7867	7917	7967	8017	8067	8117	8167	8217	8267	8317	8367	8417	8467
7568	7618	7668	7718	7768	7818	7868	7918	7968	8018	8068	8118	8168	8218	8268	8318	8368	8418	8468
7569	7619	7669	7719	7769	7819	7869	7919	7969	8019	8069	8119	8169	8219	8269	8319	8369	8419	8469

FOLD TO THIS LINE

7570	7620	7670	7720	7770	7820	7870	7920	7970	8020	8070	8120	8170	8220	8270	8320	8370	8420	8470
7571	7621	7671	7721	7771	7821	7871	7921	7971	8021	8071	8121	8171	8221	8271	8321	8371	8421	8471
7572	7622	7672	7722	7772	7822	7872	7922	7972	8022	8072	8122	8172	8222	8272	8322	8372	8422	8472
7573	7623	7673	7723	7773	7823	7873	7923	7973	8023	8073	8123	8173	8223	8273	8323	8373	8423	8473
7574	7624	7674	7724	7774	7824	7874	7924	7974	8024	8074	8124	8174	8224	8274	8324	8374	8424	8474
7575	7625	7675	7725	7775	7825	7875	7925	7975	8025	8075	8125	8175	8225	8275	8325	8375	8425	8475
7576	7626	7676	7726	7776	7826	7876	7926	7976	8026	8076	8126	8176	8226	8276	8326	8376	8426	8476
7577	7627	7677	7727	7777	7827	7877	7927	7977	8027	8077	8127	8177	8227	8277	8327	8377	8427	8477
7578	7628	7678	7728	7778	7828	7878	7928	7978	8028	8078	8128	8178	8228	8278	8328	8378	8428	8478
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7587	7637	7687	7737	7787	7837	7887	7937	7987	8037	8087	8137	8187	8237	8287	8337	8387	8437	8487
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7589	7639	7689	7739	7789	7839	7889	7939	7989	8039	8089	8139	8189	8239	8289	8339	8389	8439	8489
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7592	7642	7692	7742	7792	7842	7892	7942	7992	8042	8092	8142	8192	8242	8292	8342	8392	8442	8492
7593	7643	7693	7743	7793	7843	7893	7943	7993	8043	8093	8143	8193	8243	8293	8343	8393	8443	8493
7594	7644	7694	7744	7794	7844	7894	7944	7994	8044	8094	8144	8194	8244	8294	8344	8394	8444	8494

FOLD ON THIS LINE

7595	7645	7695	7745	7795	7845	7895	7945	7995	8045	8095	8145	8195	8245	8295	8345	8395	8445	8495
7596	7646	7696	7746	7796	7846	7896	7946	7996	8046	8096	8146	8196	8246	8296	8346	8396	8446	8496
7597	7647	7697	7747	7797	7847	7897	7947	7997	8047	8097	8147	8197	8247	8297	8347	8397	8447	8497
7598	7648	7698	7748	7798	7848	7898	7948	7998	8048	8098	8148	8198	8248	8298	8348	8398	8448	8498
7599	7649	7699	7749	7799	7849	7899	7949	7999	8049	8099	8149	8199	8249	8299	8349	8399	8449	8499

PLEASE FILL IN COMPLETELY—PRINT OR TYPEWRITE

—USE THIS SLIP FOR OCTOBER 1951 ISSUE ONLY—

101

NAME ..... TITLE .....

COMPANY .....

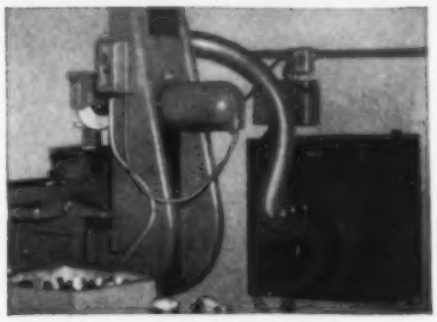
ADDRESS .....

CITY ..... ZONE ..... STATE .....

Principal Products Manufactured .....

..... Approx. Number of Employees in Plant .....

STOP DUSTS



INSTANTLY *with* DUSTKOP

Available from stock of 22 standard models
300 cfm to 10,000 cfm

for: Surface Grinders, Tool and Cutter Grinders; Polishers and Buffers; Abrasive Belts and Discs; Woodworking and Plastic Industry Equipment . . . DUSTKOPS collect almost all kinds of industrial dusts.

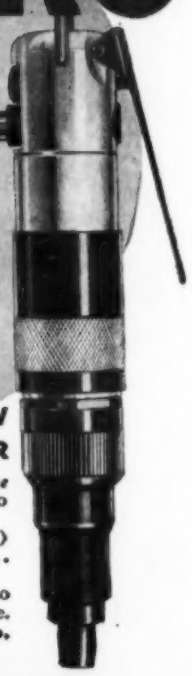
Ask for Catalog 605-2. Describe dust problem for recommendation by return mail—no obligation.

AGET-DETROIT CO.
201 Main St. Ann Arbor, Michigan

For more details circle NED-7702 on enclosed inquiry slip

New! NOBODY BUT ARO OFFERS YOU

Instant PUSH-BUTTON *Reverse*



A REVOLUTIONARY SCREW DRIVER AND NUT SETTER

ARO's new push-button valve means *instant reverse action* . . . no need to remove from work . . . no stopping to turn levers . . . no wasted time.

Adjustable clutch (available with positive clutch) Length 7-11/16" . . . outside diameter 1-5/16" . . . weight 1.4 lb.

This outstanding tool must be seen in action to appreciate its amazing action. Write for literature.

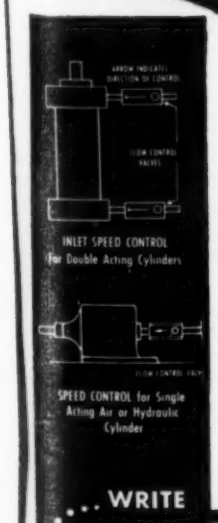
The Aro Equipment Corporation, Bryan, Ohio.
Aro Equipment of Canada, Ltd., Toronto

ARO **AIR TOOLS** Also . . . LUBRICATING EQUIPMENT . . . HYDRAULIC EQUIPMENT . . . AIRCRAFT PRODUCTS . . . GREASE FITTINGS

For more details circle NED-7703 on enclosed inquiry slip

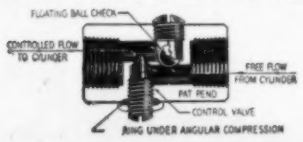
FLOW CONTROL VALVE

for Cylinder Speed Adjustments over a WIDE RANGE IN AIR OR HYDRAULIC USE



The Pneu-Trol Flow Control Valve combines an efficient Stainless Steel FLOATING BALL CHECK which opens and closes at the slightest change in flow direction, with a Vernier Type VARIABLE NEEDLE ORIFICE adjustment in a compact control which has widened air and hydraulic cylinder application by providing precise control of cylinder action. Modifications of the Pneu-Trol Valve are available as Plain Check, check with Fixed Orifice (orifice drilled by customer in the Standard Check Valve), Needle Valve and Velocity Limiting Check, as illustrated at left. All Pneu-Trol Valves are made from bar stock in brass (up to 1000 psi) or steel (5000 psi) or other body metals to your specifications. All internal parts are Stainless. All valves available in 5 sizes—⅛", ¼", ⅜", ½", and ¾".

Attractive prices — immediate delivery. Write for illustrated circular and price list.



. . . WRITE . . . . **Pneu-Trol Devices, Inc.**
1432 N. Keating Ave., Chicago, Ill.

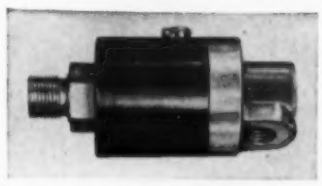
For more details circle NED-7704 on enclosed inquiry slip

GRAVITY ROLLER CONVEYOR
three units required in installation

Designed to overcome almost any installation problem with only three units—straight sections, 90-degree curved sections and adjustable trestles—is this gravity roller conveyor for handling and transporting carton, boxes, crates and pallets. Balanced rollers rotate on full length cold rolled steel shafts fitted with ball bearings. Shafts retain alignment and cross channels prevent frame from spreading under heavy loads. Rollers are on 4-in. centers and are raised ⅜-in. above frame. Made by **Lyon Metal Products, Inc.**, 324 Clark St., Aurora, Ill.

For more details circle NED-7705 on enclosed inquiry slip

ROTATING AIR UNION
3500 rpm maximum operating speed



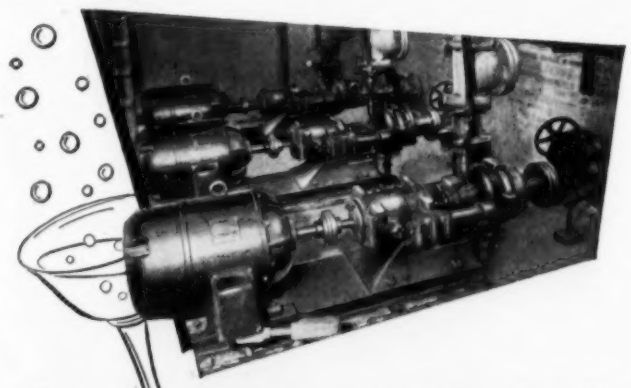
Balanced sealing feature of model 1105 rotating air union prevents line pressures from increasing load on sealing faces, plus minimizing wear and permitting predetermined low torque. Lapped faces of Graph-Mo tool steel and carbon form leakproof seal. Design permits quick replacement of seal faces, often without removing union from equipment. Aluminum housing and end bell and sealed-for-life ball bearings are incorporated. Two types are available: standard shaft mounting type and special "in-the-shaft" mounting type which reduces overhang. Rotors are available with ⅝-in.-18 N. F. or ⅜-in. pipe threads. Maximum air pressure is 150 psi. Made by **Deublin Co.**, Dept. A, 1155 Waukegan Rd., Glenview, Ill.

For more details circle NED-7706 on enclosed inquiry slip

DESICCATOR
stores small hot or cold crucibles

Made of transparent glass with screw-cap lid, Dri-Jar desiccator can be used for storage of either hot or cold crucibles or of metallurgical, biological or chemical samples up to 3 x 5½ in. Petals of cloverleaf pattern cut into shelf are adjustable for various sizes of crucibles. One jar will hold from two No. 3 crucibles to 24 No. 0000 crucibles at one time. Attached to lid are three steel ribs with calibrated slots which permit varied arrangements of 3-in. diameter shelves. Area is allowed at bottom of jar for liquid or dry desiccant. Made by **Bethlehem Apparatus Co.**, 820 Front St., Hellertown, Pa.

For more details circle NED-7707 on enclosed inquiry slip



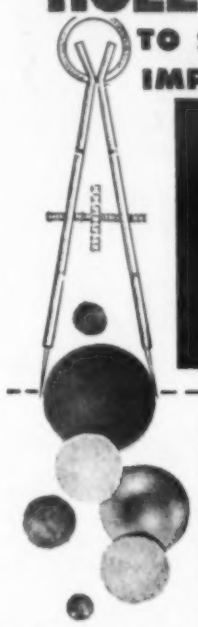
Guzzling Corrosive Cocktails To Make Better Copper

Making "grade A" copper depends on the constant circulation of hot, corrosive copper sulphate. This battery of Nagle type TW pumps guzzles hundreds of gallons of this metal-ravaging mixture, a day in a smelting and refining plant. Famous Nagle features like these will keep on the job years longer; select corrosion-abrasion alloys for water end parts, ample slippage seal adjustment, maintenance that is a marvel of simplicity. Follow the lead of hundreds of Nagle pump users. Write today for the complete Nagle solution to your most corrosive or abrasive pumping problems . . . vertical, horizontal and self-priming.

Nagle Pumps, Inc.
INDUSTRIAL PUMPS FOR ABUSIVE APPLICATION
1265 Center Ave. Chicago Heights, Ill.

For more details circle NED-7708 on enclosed inquiry slip

HOLLEY DISCOVERS HOW TO SPARK A CARBURETOR IMPROVEMENT WITH



ACE PRECISION NYLON BALLS

Holley Carburetor Co., Detroit, uses Ace Nylon Balls as check valves in carburetors to permit a higher degree of spark advance.

For the first time . . . DuPont Nylon FM # 10001 balls mass-produced to close tolerances. The result . . . toughness at low temperatures, form stability at high temperatures, light weight, chemical and abrasion resistance.

SIZES ⅛" - ¾"
TOLERANCES ± .001

Hundreds of Industrial Applications! Let our engineers advise you.

Request samples and bulletin TODAY

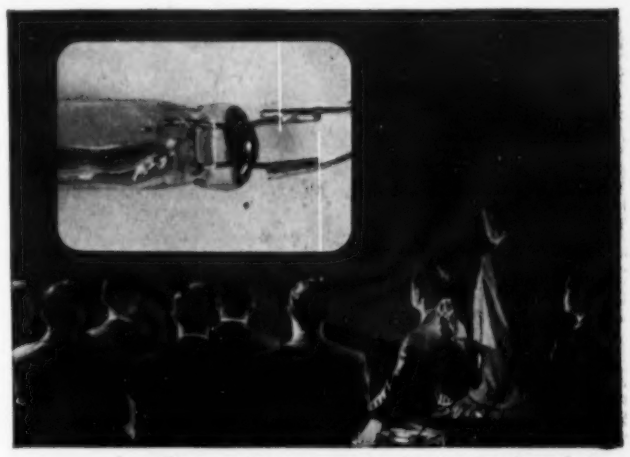
ACE PLASTIC COMPANY
Precision Plastic Fabricators and Extruders
91-28 VAN WYCK BLVD. • JAMAICA 2, N. Y.

For more details circle NED-7709 on enclosed inquiry slip

Now... High Speed Movies

OF MECHANICAL ACTION *AND* OSCILLOGRAPH TRACES

Combined on One Film



These engineers are seeing for the first time what actually happens at the "break" of a mercury switch.

The Kodak High Speed Camera can now be supplied with a special feature which permits the recording of cathode-ray oscillograph traces through the back of the film. This makes possible high speed motion pictures of mechanical action with its electrical aspects simultaneously superimposed *on the same 16mm film.* When projected at normal speed, you get a complete picture of combined mechanical and electrical action slowed down as much as 200 times.

This basic improvement has countless new applications for solving design, production, and product performance problems through high speed movies, particularly those involving electrical equipment. Since an argon lamp times the film travel, extremely accurate analysis is possible. This unique tool may be the answer for which you have been looking. Further information on this new feature and a copy of the booklet, "Magnifying Time," will gladly be sent on request.

EASTMAN KODAK COMPANY
Industrial Photographic Division
Rochester 4, N. Y.

Kodak

For more details circle NED-7710 on enclosed inquiry slip

Strongest

in every size

Each size of Worthington QD sheaves is designed for the load it has to carry—rather than proportioned from one basic design.

I-beam spokes on driven sheave help carry heavier load with less sheave weight.

Give your men the convenience of QD's exclusive two-part taper-mated cone-grip construction and long pull-up bolts—easy to get on, easy to get off, yet always tight on the shaft. And give your drives the strength of QD's sized-for-load designs, locked shaft key and stronger I-beam spokes.

Write for Bulletin B-1400-B7F. Worthington Pump and Machinery Corporation, Multi-V-Drive Sales Division, Buffalo, N. Y.

WORTHINGTON

MV.1.6

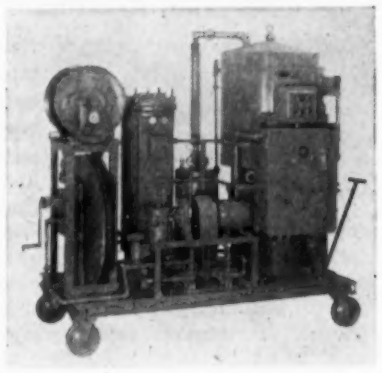
For more details circle NED-7711 on enclosed inquiry slip

HAND TACHOMETER measures speeds up to 30,000 rpm

Essentially unchanged from former design, Dr. Horn centrifugal hand tachometer is again available. Six ranges for speeds from 25 to 30,000 rpm are covered by single instrument. It incorporates overspeed protection and is designed for dependable service in industrial applications. Distributed and serviced by **James G. Biddle Co.,** Dept. 35-65-23, 1316 Arch St., Philadelphia 7, Pa.

For more details circle NED-7713 on enclosed inquiry slip

HYDRAULIC OIL PURIFIER can be used with hydraulic system



Usable for periodic purification of hydraulic oil in machine tools, molding and extrusion presses and other hydraulic systems, model 50-X Hilco Hyflow oil reclaimer removes suspended solids, oxidation products and water. Unit can be operated simultaneously with hydraulic system. It makes use of water resistant fuller's earth cartridges for mineral or synthetic oils or fine fiber cellulose cartridges for inhibited oils. Heat exchanger insures a return of cool oil to hydraulic system. Two swivel and two fixed 8-in. rubber tired ball bearing casters and draw bar provide mobility for purifier which meets J.I.C. electric and hydraulic standards. Made by **Hilliard Corp.,** 40 W. Fourth St., Elmira, N. Y.

For more details circle NED-7714 on enclosed inquiry slip

RUBBERIZED FABRIC GLOVES protect hands from strong fluids

Designed for plating room use, Neox coated gloves are tight and safe against harmful fluids. Wide curved thumb span allows free thumb and finger action while long palm permits free hand action in both knit-wrist and gauntlet styles. Curved fingers provide normal hand shape and flexibility. Gloves are available from stock in 14 and 18-in. elbow length gauntlet styles. Made by **Hanson-Van Winkle-Munning Co.,** W. Church St., Matawan, N. J.

For more details circle NED-7715 on enclosed inquiry slip

private escalator

Heavy cartons travel on their own private escalator . . . roll up the incline on ball bearing rolls progressed by power-driven tandem chains with cross pusher bars. This safe, fast method of package transportation has many applications.

Can this conveyor reduce manhandling costs in your plant? It costs you nothing to find out. Write today.

ALVEY Engineered PACKAGE CONVEYING

ALVEY CONVEYOR MFG. CO.
P. O. BOX 3031 • ST. LOUIS 24, MO.
Sales Offices in Principal Cities

For more details circle NED-7717 on enclosed inquiry slip

LEADS BY 6 to 1

In answer to this question from a recent national survey . . . "What brand do you sell?" . . . Carboloy "Live-Spiral" Drills got more votes than the next six brands combined . . . leading by over 6 to 1! And "Live-Spiral" Drills lead because they *outperform* them all. Just look what users say:

PLUMBING CONTRACTOR: *"These drills are A-1."*

HEATING CONTRACTOR: *"Excellent performance."*

INDUSTRIAL USER: *". . . exactly what we wanted . . . delighted to get them."*

Carboloy "Live-Spiral" Drills available in sizes ¼" to 1", packaged individually or in handy kits. Fit any rotary electric drill.

Famous "Live-Spiral" Drills *automatically clean* holes as they drill. No packing! Tipped with Carboloy Cemented Carbide, *the hardest metal made by man.* Longer wear! What a combination! See your dealer or write direct.

"Carboloy" and "Live-Spiral" are trademarks of Carboloy Department of General Electric Company.

CARBOLOY
DEPARTMENT OF GENERAL ELECTRIC COMPANY
11189 E. 8 Mile Ave. • Detroit 32, Michigan

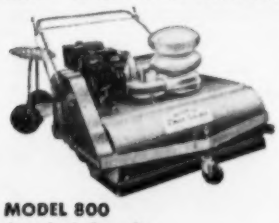
For more details circle NED-7718 on enclosed inquiry slip

Wilshire REALLY PAYS OFF!

MODEL 1000-M
Super Heavy Duty with forward and reverse drive, 100% visibility.

CUTS *Your* SWEEPING COSTS 75%

Are costs getting the best of you? Is manpower a problem? Forget it—get a WILSHIRE Power Sweeper—the one-man gang that picks up everything from cigarette butts to pop bottles in one easy operation—does it so efficiently that users from coast to coast report reductions in cleanup costs of 75% *and more.* Make us prove it—with a FREE demonstration on your job. Write today for full information.



MODEL 800
America's favorite Heavy Duty Sweeper with finger-tip dual control. (Sulky optional.)

FACTORY TESTED... 90-DAY GUARANTEE

For dealer nearest you write Dept. G-10

Wilshire
POWER SWEEPER CO.
526 W. Chevy Chase Drive
Glendale 4, Calif.

SWEEPING THE COUNTRY SINCE 1940

For more details circle NED-7712 on enclosed inquiry slip

There's a new idea here!

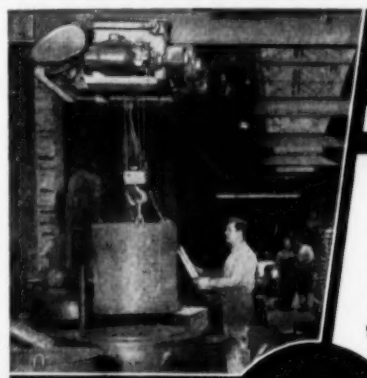
De Laval products at work!

We've simplified the already simple centrifugal pump! Our new GS pump is designed so that every working part . . . every part subject to wear, is contained in one easily replaced unit rotor assembly. Through our Service and Exchange Plan new rotor assemblies are available for immediate shipment from conveniently located stocks throughout the country. This means good service, and if maintenance ever does become necessary, all you have to do is remove the cover and end plate bolts, lift out the old rotor and drop a new one in place. *It's that easy!* Capacities to 400 gpm—heads to 230 feet.

DE LAVAL STEAM TURBINE CO., TRENTON 2, N. J.
TURBINES • HELICAL GEARS • CENTRIFUGAL BLOWERS AND COMPRESSORS
CENTRIFUGAL PUMPS • WORM GEAR SPEED REDUCERS • IMO OIL PUMPS

DE LAVAL 50th Anniversary

For more details circle NED-7716 on enclosed inquiry slip



NORTHERN HEAVY DUTY HI-LIFT HOISTS

For handling a lot of different loads in general purpose use, Northern Heavy Duty Hi-Lift Hoists will give you wider service per dollar of investment.

for safer, faster material handling at all times

Northern Cranes are designed and built to give you safer, faster overhead material handling at all times.

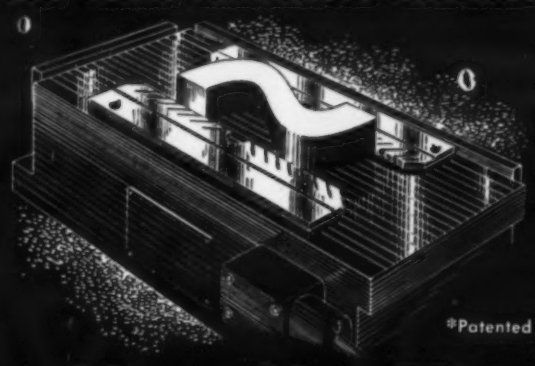
NORTHERN ENGINEERING WORKS
2615 Atwater, Detroit, Mich.

NORTHERN CRANES

For more details circle NED-7719 on enclosed inquiry slip

HOLD BRASS GLASS ALUMINUM

...any rigid non-magnetic materials ON YOUR MAGNETIC CHUCKS!



*Patented

Magna-Vise* DOES IT!

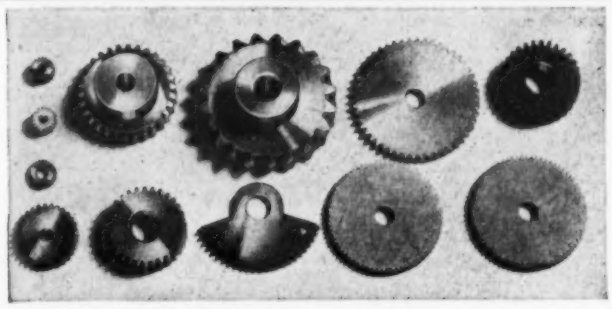
For all the details . . . write Dept. ND101.

Hanchett MAGNA-LOCK CORPORATION

Magna-Lock Magnetic Chucks and Devices

BIG RAPIDS • MICHIGAN, U. S. A.

For more details circle NED-7720 on enclosed inquiry slip



Rynel Certified Gears fractional h. p.

PRECISION CONTROL — Blank to Finished Gear

Rynel precision methods start with accurately formed blanks in our own gear blanking department. Tooth form, accuracy and finish are carefully controlled every step of the way. Gears are cut by experienced gear men on precision equipment of the latest design, and checked by skilled gear inspectors. • That's why engineers and designers know Rynel Gears produce smooth, silent, dependable performance.

SPUR • HELICAL • INTERNAL • WORM • WORM GEAR • RATCHET SEGMENT • SPROCKET • STRAIGHT-TOOTH BEVEL GEARS

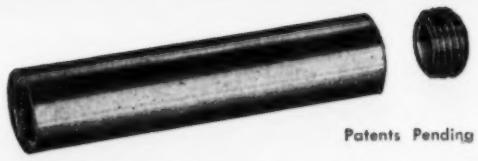
Send For Our Latest Bulletin

Rynel Corporation

302 MILLER ST., STERLING, ILLINOIS

For more details circle NED-7721 on enclosed inquiry slip

How SQUARE HOLED SLEEVES SPEED UP TOOL-MAKING!



Patents Pending

One of the most difficult problems in toolmaking can be solved easily and quickly with Sturdy Square Holed Sleeves. The perfection of broached square holes can be had in boring bars, milling cutters and many other applications at a small fraction of the cost of imperfect hand-made square holes. The Sturdy Square Holed Sleeve consists of a round sleeve with a perfectly square hole broached through the center. This hole is tapped at one end to receive a back-up screw which is furnished with the Sleeve. The Sleeve can be sweated or pressed into a drilled and reamed hole to make a perfectly square accurate hole in a very few minutes.

The Sturdy Square Holed Sleeve will save you many hours and many dollars in the making of boring bars, tool holders and other tools requiring square holes.

BUSHINGS MADE IN FOLLOWING SIZES: 3/16, ¼, 5/16, ⅜, 7/16, ½, ⅝, ¾, 1"

•

STURDY BROACHING SERVICE
23514 TELEGRAPH RD., DETROIT 19, MICH.

Write for Literature

For more details circle NED-7722 on enclosed inquiry slip

PORTABLE WATER COOLER
keeps contents hot or cold

Thick layer of Dow Styrofoam insulation between inner and outer walls of this Igloo water cooler keeps liquids hot or cold for several hours. Readily portable, cooler has corrugated galvanized sides and double folded seams for strength. It can be supplied with or without pushbutton faucet which is inset flush with side for protection from damage. Two heavy carrying handles protect top cover which is removable for filling or cleaning. Capacities are 1½, 3, 5 and 10 gallons. Distributed by **Igloo Mfg. Co.**, 6502 Rusk Ave., Houston 11, Tex.

For more details circle NED-7723 on enclosed inquiry slip

LOAD CENTER
magnetic device has two circuits

Capable of continuously carrying 100 per cent of its full rated load, this two-circuit load center has full magnetic action which is unaffected by temperature changes. Unit has rated 55-amp main with capacity of two 50-amp, single pole, 120 v ac magnetic circuit breakers. It can be used as main disconnect in place of 60-amp fused switch. Made by **Murray Mfg. Corp.**, 1280 Atlantic Ave., Brooklyn 16, N. Y.

For more details circle NED-7724 on enclosed inquiry slip

ELECTRIC FURNACES
heat controlled to exact limits

Applicable for regular or case hardening, drawing, tempering and other operations is line of Lucifer electric heat treating furnaces. Controls permit any furnace in line to be brought to desired heat slowly or rapidly as desired. Cooling time also can be controlled to exacting standards. Furnaces are furnished complete for operation within 1 hr after uncrating. Offered by **Gilbert S. Simonski Co.**, Route 611, Neshaming, Pa.

For more details circle NED-7725 on enclosed inquiry slip

Now, you can get . . .

BETTER MARKING

Get all these extras in MARSH INK at no extra cost!

NEEDS NO SHAKING

BLACKER—more marks per gallon

WEATHERPROOF, permanent

WON'T HARDEN BRUSHES

Marsh Ink is not to be confused with "dye-type" non-settling inks. Marsh Ink is formulated with PURE BLACK PIGMENT which makes a much BLACKER MARK. It is fast-drying on absorbent surfaces—wooden boxes, fiber cartons, paper. Won't harden brushes. Costs no more than regular inks. Goes farther, gives more marks per gallon.

FREE SAMPLE Send your name on company letterhead for a FREE pint can of Marsh Ink! Try it in a Marsh Fountain Brush for one week. No obligation.

Marsh Stencil Machine Co. • 23 Marsh Bldg. • Belleville, Ill., U. S. A.

For more details circle NED-7726 on enclosed inquiry slip

Find out for yourself....

why people who try it BUY IT!

You've used regular "mikes" for such a long time you'll be amazed at the downright accuracy and plain honest-to-goodness convenience you can get with this CONSTANT PRESSURE, INDICATING MICROMETER. Once you've used it you'll recognize its superior accuracy — and you'll appreciate the convenience of reading an indicator instead of barrel graduations. You'll see how easy it is to check out-of-round and taper, too. You'll also be pleased with the usefulness of the pushbutton Retracting Anvil and the Tolerance Hands when measuring duplicate parts. You don't have to take our word for it. Find out for yourself. Ask to see the Federal MIKEMASTER . . . and try it on your work. Write to Federal Products Corporation, 1710 Eddy Street, Providence 1, R. I.

FEDERAL

Largest manufacturer of indicating type gages . . . exclusively.

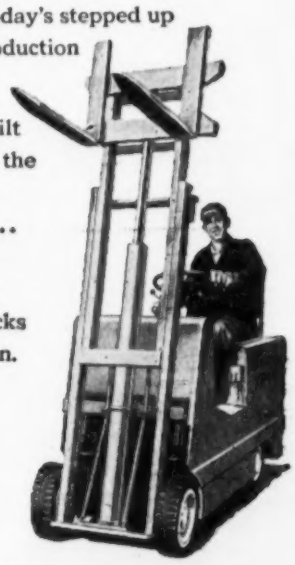
For more details circle NED-7727 on enclosed inquiry slip

THE BIG 89% TELLS YOU WHY A YALE ELECTRIC TRUCK IS YOUR BEST BUY

89% of the Yale Electric Trucks sold today are bought by previous users . . . so satisfied with Yale performance and Yale economy that Yale is their choice again.

• Seeing that extraordinary record — you'll say these must be extraordinary trucks. And they are!

They bring to your materials handling problems new shortcuts — new savings in man-hours — new opportunities to answer today's stepped up demands for increased production and faster deliveries.



Rugged Yale quality — built into every part — explains the service these trucks give even in the toughest jobs . . . even when working on round-the-clock schedules that would knock out trucks of less durable construction.

Ask for complete details about Yale Electric Trucks — and their industry-wide record of satisfied users.

YALE is a registered trade mark of the Yale & Towne Manufacturing Co.

SEND THIS COUPON TODAY

The Yale & Towne Manufacturing Co., Dept. 3710
Roosevelt Boulevard & Haldeman Ave., Philadelphia 15, Pa.
I am interested in cutting my materials handling costs.
☐ Please have your local representative call on me.
☐ Please send me free detailed literature.

Name_____

Company_____

Street_____ City_____ State_____

In Canada write: The Yale & Towne Mfg. Co., St. Catharines, Ontario

YALE & TOWNE

The Yale & Towne Manufacturing Co., Philadelphia 15, Pa.

YALE GAS AND ELECTRIC INDUSTRIAL TRUCKS • YALE WORKSAVERS, YALE HAND TRUCKS • YALE HAND AND ELECTRIC HOISTS

For more details circle NED-7728 on enclosed inquiry slip

INSPECTION'S EASY
with T & B Sta-Kon® Self-Insulated Terminals*

One look through the *translucent* nylon insulation on T & B Sta-Kon Self-Insulated Terminals shows the stake mark that says *the job's OK.*

These new components end the risk of shorts between closely-mounted terminals. Insulation prevents metal-to-metal contact — withstands attack by gasoline, naphtha, hydraulic fluids. Shipped in one piece, assembled in one operation — with SHURE-STAKE Hand Tools or air-powered types.

Engineered Right—Distributed Right. Sta-Kon Self-Insulated Terminals are typical of all T & B quality fittings designed for lowest installed costs. Furnished 100% through T & B distributors under the T&B Plan.

*Patent Pending

THE THOMAS & BETTS CO.
INCORPORATED
24 BUTLER STREET, ELIZABETH 1, NEW JERSEY
Manufacturers of Electrical Fittings since 1898
Originators of self-insulated solderless terminals in 1935

▲ For more details circle NED-7729 on enclosed inquiry slip ▲

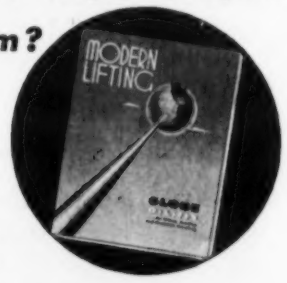
Globe Loading Lift
Speeds Loading and Unloading

Trucks, trailers, railway cars, and cargo planes can be loaded faster and at lower cost with a Globe Loading Lift. What's more, material can be handled with less risk of damage to cargo or injury to workers.

The Globe Loading Lift is a simple elevating platform that eliminates the need for ramps, gangplanks, and "muscling" of cargoes. Platform recesses into floor or driveway in "down" position. Accurate control makes for easy, flush-leveling to keep goods moving on an even plane.

Got a Lifting Problem?

GLOBE
has the answer



Muscle is the world's most wasteful lifting power. A Globe OiLIFT will do it cheaper and better.

For helpful information on Self-Leveling Ramps, Machine Loading Lifts, Industrial Truck Service Lifts, Production Lifts, etc., write for bulletin NE-312.

GLOBE HOIST COMPANY • 1000 E. Mermaid Lane, Philadelphia 18, Pa.
(Factories at Des Moines, Iowa & Philadelphia, Pa.)

▲ For more details circle NED-7730 on enclosed inquiry slip ▲

REDUCE FATIGUE and PROMOTE SAFETY WITH AMERIFLEX Hardwood Link MATTING

Ideal for use around machinery. Keeps the feet off cold, damp floors. Lies flat. * Substantially constructed for long service. * Beveled ends prevent tripping. * Grooves allow drainage. * Rolls up for easy handling and cleaning. * Any width up to 42 inches. Any length.

AMERICAN MAT CORPORATION
"America's Largest Matting Specialists"
1733 Adams Street Toledo 2, Ohio

( ) Please send literature and prices on Ameriflex Hardwood Link Matting.

Name .....
Firm .....
Street .....
City & State .....

IN CANADA: American Mat Corporation, Ltd., Canada Trust Building, Windsor, Ontario

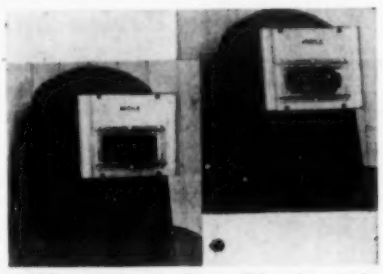
▲ For more details circle NED-7731 on enclosed inquiry slip ▲

ATTENUATOR SWITCHES
with up to 60 contact positions

Line of 12 attenuator switches includes round, single-deck units in one and two-pole types with up to 60 contact positions and rotation range of 144 to 360 degrees. Ratings are 1 amp at 25 v; ½ amp at 50 v; ¼ amp at 110 v; and 0.2 amp at 220 v. Switches are obtainable with or without detent mechanism and all have silver alloy contacts, wiper arms and collector rings. Most types can be ganged by using square switch plate slightly larger on side than specified diameter of standard round plate. Made by **Shallcross Mfg. Co.,** 10-F Jackson Ave., Collingdale, Pa.

▲ For more details circle NED-7732 on enclosed inquiry slip ▲

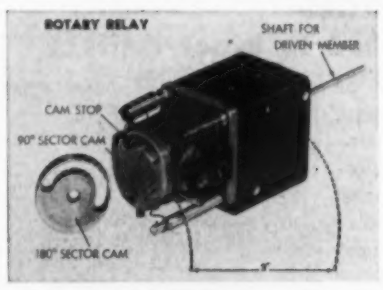
WELDING HOOD WINDOW
blowing moves glass up for vision



Quik-Lift window which fits any welding hood eliminates swinging back hood when changing welding rod or positioning small pieces for welding. Window consists of aluminum frame which fits on front of hood and contains moveable smoked glass. Blowing into mouthpiece fitted inside hood causes smoked glass to move up and permit vision through protective clear glass. To bring smoked glass down, welder sucks in on mouthpiece. Made by **Argyle Mfg. Co.,** 100 Coal St., Colchester, Ill.

▲ For more details circle NED-7733 on enclosed inquiry slip ▲

ROTARY SWITCH ACTUATOR
requires no holding current



Intermittent pulsed reciprocating rotational motion of up to 330 degrees with torques to suit individual requirements is provided by series of light, compact, rotary switch actuating mechanisms. Drive consists of miniature motor in special circuit permitting rapid reciprocal switching up to 10 cycles per minute. Applications are in field of microwave switches and phase shifters whose material elements require low torque rotary drivers, in high or low voltage switching and where rapid rotary action with no lateral thrust is needed. Unit requires no holding current and can be operated from most common power supplies with negligible power drain. Made by **General Precision Laboratory, Inc.,** Dept. 3, Pleasantville, N. Y.

▲ For more details circle NED-7734 on enclosed inquiry slip ▲

Reported by Users of
STANDARD PNEUMATIC TUBE SYSTEMS

Safe — swift delivery by "AIR" of messages . . . money . . . merchandise!

Savings as high as $10,000 in 9 months' time are reported by users of Standard Pneumatic Tube Systems — filling orders, moving merchandise, money, messages, records, between departments. Reduce messenger and telephone service. Can be installed for a wide range of needs in stores, warehouses, manufacturing plants, offices. Write for Bulletin No. 11 and complete information — address Dept. NED-101.

STANDARD CONVEYOR CO.
North St. Paul 9, Minn.

Write for Bulletin No. 11 — Standard Pneumatic Tube Systems. Address Dept. NED-101.

Standard GRAVITY & POWER CONVEYORS

▲ For more details circle NED-7735 on enclosed inquiry slip ▲

new
HANDY SANDBLAST . . . *Low Price*

Widely used for cleaning dies, tools, pistons, piston rings, valves and other small parts.

It can be used with soft abrasives, such as ground corn cobs or nut shells, or with hard abrasives such as sand, aluminum oxide, steel grit or shot. Soft abrasives will remove surface impurities without cutting into metal. Hard abrasives will clean and prepare surfaces for any kind of coating.

This unit is designed to be placed on a workbench, connected to a compressed air line and to a 110 V. lighting circuit. It has two lighting fixtures, and an exhaust fan with large dust bag for making the operation dustless. Two armholes with rubber sleeves and gloves permit the operator to handle the work under the blast gun. The cabinet can be operated from a standard 5 H.P. 2-stage garage compressor.

Made by The W. W. Sly Manufacturing Company, 4748 Train Avenue, Cleveland 2, Ohio. Advt.

▲ For more details circle NED-7736 on enclosed inquiry slip ▲

What takes off the coat and helps the salesmen?

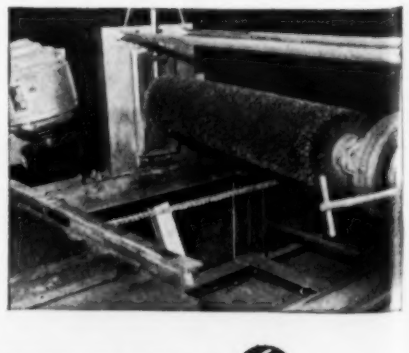
. . . A brush! Here's a door-way to better aluminum products:

The product is an aluminum door. It was impractical to make lacquer adhere uniformly to the aluminum. With the help of the **O**sborn **B**rushing **A**nalyst, a machine using Osborn wire brushes was built to prepare the surface for lacquering. Result: lacquer sticks perfectly to the brushed surface, giving an attractive, durable finish that helps sales.

The **O**sborn **B**rushing **A**nalyst is opening the door to lower costs and better products of every description. Have him survey your operations, including cleaning and finishing. Call or write *The Osborn Manufacturing Company, Dept. 556, 5401 Hamilton Ave., Cleveland 14, O.*

THE BRUSHING MACHINE Door is mounted on a conveying table which travels under Osborn brushes mounted as shown. Brush at left brushes side of door. After traveling one way, door is turned over and table reverses.

YOU TOO can have a simple brushing machine to help you produce better, more salable products. Let Osborn show you how.



OSBORN

LOOK FOR THE NAME OSBORN . . . RECOGNIZED EVERYWHERE FOR QUALITY WORKMANSHIP AND MATERIALS

▲ For more details circle NED-7737 on enclosed inquiry slip ▲

There are more chips falling in industry today than ever before. They must be disposed of faster, reclaimed if valuable, and with less man power.

Spencer Vacuum, applied through a nozzle at the tool, or a hose in the bottom of an engine head, or tank, or a wide powerful floor tool not only picks up metals, but separates them from the dust. Gold, magnesium, solder and welding flux are a few of the materials being salvaged every day by Spencer machines.

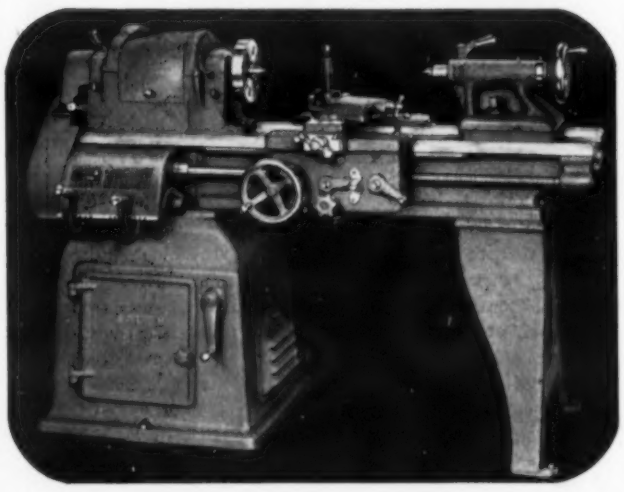
There are more than 100 applications of Spencer Vacuum in industry, from conveying to large area cleaning and water pick up. Ask for Bulletin No. 144.

THE SPENCER TURBINE COMPANY • HARTFORD 6, CONNECTICUT
SPENCER HARTFORD
439-C

For more details circle NED-7738 on enclosed inquiry slip

SOUTH BEND

14½" LATHES FOR FAST PRECISION MACHINING



South Bend 14-1/2" Lathes hold down machining costs on work that requires extreme accuracy. They are fast and easy to operate . . . and readily adaptable to a wide variety of jobs. *Write for Catalog.*

SOUTH BEND LATHE
Building Better Tools Since 1906 • South Bend 22, Indiana

For more details circle NED-7739 on enclosed inquiry slip

FLASH-O-LENS

Lights and Magnifies

metal surfaces for fast, accurate inspection

Another FLASH-O-LENS at work—this time at Eastman Kodak Company!

You *too* can cut down inspection time and improve product quality by using the simple, handy, low-cost instrument that *spotlights* the work and *magnifies* it at the same time . . . the FLASH-O-LENS!

Just put a FLASH-O-LENS on the part you're inspecting. Built-in bulb puts light *on* the field of vision—keeps it *out* of user's eyes. Accurately ground lenses give sharply detailed enlargement. Result: time-and-eye-saving inspection, surer maintenance of quality standards. Battery-operated and plug-in models—from $10.65 up. Write for literature on suggested applications, types and prices.

E. W. PIKE & COMPANY
492 NORTH AVE. ELIZABETH, N. J.

For more details circle NED-7740 on enclosed inquiry slip

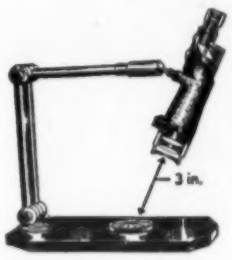
FACE MILLING CUTTER
has solid carbide indexable blade

Designed for milling cast armor plate and other difficult steel machining jobs, this Futurmil solid carbide, indexable blade, face milling cutter has square blade available in three sizes ranging from ¾ to 1 in., depending on depth of cut desired. Blades, when dull are indexed to new cutting edge, as clearance angles are set by position of blade in cutter body rather than being ground onto blade. They can be indexed or substituted without removing cutter from milling machine spindle. Blade can be indexed eight times before regrinding, which is performed on gang setup on surface grinder. Made by **Detroit Milling Cutter Co.,** 28625-6 Grand River Ave., Farmington, Mich.

For more details circle NED-7741 on enclosed inquiry slip

ERECTING MICROSCOPE
permits examination from any angle

Universal mount of 35-power erecting microscope designed for bench or laboratory use permits free swing in any direction and facilitates examinations from any angle. Joint tension of mount is fully adjustable. Prism erectors give viewer an erect instead of inverted image. Instrument which is 6½ in. long and is mounted on 7 x 9-in. base has brass body with black crackle finish. Working distance from objective to object is about 3 in. permitting such work as dissection or tooling to be carried on while looking through microscope. Three-element color corrected objective has diameter of 1 in. Made by **Edmund Scientific Corp.,** Dept. 69, Barrington, N. J.



For more details circle NED-7742 on enclosed inquiry slip

JIG FEET
usable also as rest buttons

Carburized, hardened and ground jig feet and rest buttons are available in five additional sizes which are carried in stock. Jig feet are offered in ⅝, ⅞ and 1⅜-in. diameters in thicknesses ranging from ¼ to 1 in., depending upon size. Proper size socket-head screws are furnished. Rest buttons with integral stems are made in ¼ to ¾-in. head thicknesses and ½ and ⅝-in. diameters. Full size templates for tracing purposes are available free from **Morton Machine Works,** Dept. 11, 2421 Wolcott St., Ferndale 20, Mich.

For more details circle NED-7743 on enclosed inquiry slip

Save Time, Labor, Dollars!

TEST • STUDY • CONTROL

VISCOSITY

As Simply, Quickly and Easily as Taking Temperature Readings

Just a flick of a switch, then read the Brookfield dial, and you have your viscosity determination in centipoises. The whole operation, including cleaning up, usually takes *less than a minute.*

Available in a variety of models suitable for extremely accurate work with both Newtonian and non-Newtonian materials, Brookfield Viscometers are portable and plug in any A.C. outlet — *can be used in Lab, Plant or both.*

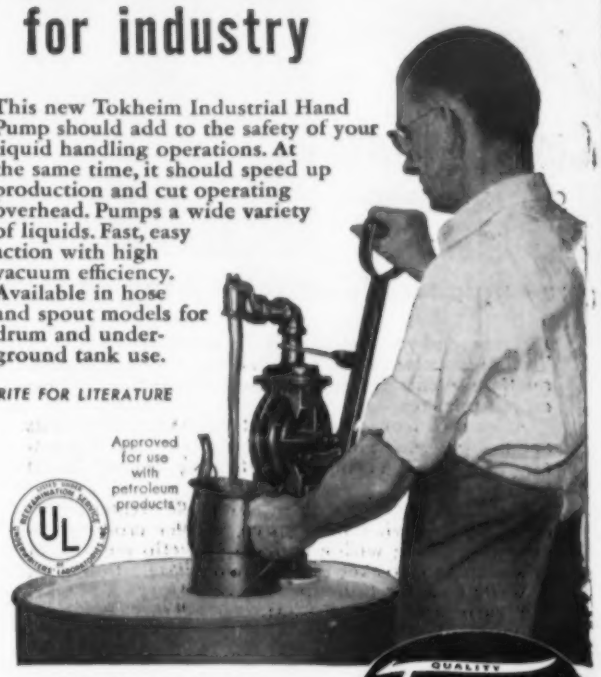
Write today for fully illustrated catalog showing Brookfield Viscometers adaptable to any viscosity problem *from less than one to 32,000,000 centipoises.*

BROOKFIELD COUNTER-ROTATING MIXER — Two concentric, oppositely rotating shafts, propeller equipped and driven by two motors, produce an annular flow and up to 48,000 scissor-like cuts/minute. Enable exceptionally fast, effective and efficient laboratory mixing. *Not* a "stirrer." Write for Brookfield MIXER brochure.

Brookfield ENGINEERING LABORATORIES, INC.
230 Porter St., Stoughton, Mass.

For more details circle NED-7744 on enclosed inquiry slip

SAFER liquid handling for industry



This new Tokheim Industrial Hand Pump should add to the safety of your liquid handling operations. At the same time, it should speed up production and cut operating overhead. Pumps a wide variety of liquids. Fast, easy action with high vacuum efficiency. Available in hose and spout models for drum and underground tank use.

WRITE FOR LITERATURE

General Products Division
TOKHEIM OIL TANK AND PUMP COMPANY
1656 Wabash Ave., Fort Wayne 1, Ind.
Factory Branch: 1309 Howard St.
San Francisco 3, California

QUALITY TOKHEIM DOUBLE-ACTION HAND PUMPS

For more details circle NED-7745 on enclosed inquiry slip

NEW
a low-cost whiteprinter

BRUNING'S COPYFLEX "20"

Here's the new Bruning Model 20 Copyflex. Because of its low price, thousands of companies now can make their own whiteprints and thus realize a substantial saving. Now you can produce your whiteprints *when* you want them, as you want them.

It will pay for itself by producing sharp, clean prints of your engineering drawings as well as copying your production orders, reports, specifications, defense order copies, etc.

The Model 20 is a completely new, medium volume machine of advanced design, yet sells for the lowest price of any machine in its class. It has a full 46" printing width, and takes cut sheets or roll stock.

Compare these advantages

- **LOWEST PRICED** machine of its class available.
- **NO FUMES.** Bruning Copyflex machines use no vapor developer therefore cannot emit unpleasant fumes.
- **NO INSTALLATION.** No exhausts needed. Just connect to an ordinary 115 volt AC electric power circuit.
- **EASY OPERATION.** No training needed — anyone can operate a Copyflex.

See how the Model 20 Copyflex (or one of our five other models) can help you. Write today for free descriptive literature.

BRUNING

Specialists in copying since 1897

CHARLES BRUNING COMPANY, INC.
Dept. J-101 100 Reade St. New York 13, N. Y.

For more details circle NED-7746 on enclosed inquiry slip.

Announcing

Centr-A-Power
SWITCHBOARDS
custom-built...
pre-engineered...at money-saving prices

Have us send you Bulletin TEB-3 which tells you how Trumbull's new CENTR-A-POWER can give you highest quality switchboard materials and construction at lowest possible cost.

Assembled from standardized interchangeable units and troughs with a minimum of engineering, CENTR-A-POWER provides a compact and flexible "center" for all your switching.

CENTR-A-POWER conveniences include greater capacity troughs—saving floor space; greater cross-section gutters—making wiring easier; quick-clip attachment of switch and breaker units—saving installation time.

Write now for Bulletin TEB-3 on CENTR-A-POWER. THE TRUMBULL ELECTRIC MANUFACTURING COMPANY, Plainville, Conn.

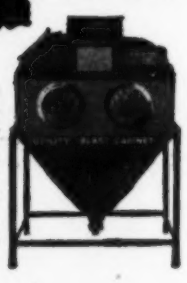
TRUMBULL (T) ELECTRIC

Department of General Electric Company

▲ For more details circle NED-7747 on enclosed inquiry slip ▲

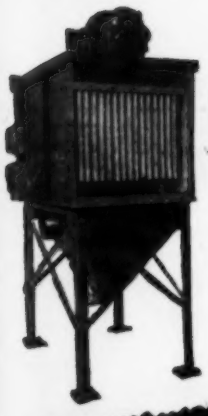
Here's how Pangborn
Solves these Problems
with this modern equipment

BLAST CLEANING!



Blast Cleaning Cabinet quickly and easily cleans metal parts of rust, grime, dirt, paint, etc. Produces a clean, smooth surface on pieces up to 60" x 36". Models available from $315.00 and up.

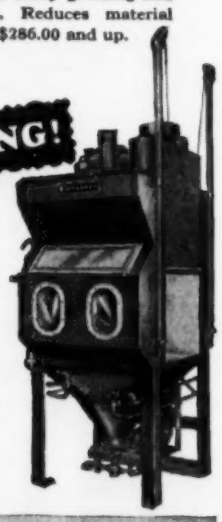
Blast Cleaning Machine not only removes rust, dirt, scale, etc., but is ideal for maintenance and many other uses. Cleans large objects such as bridges, structural work, tanks before painting. Six sizes, portable or stationary, from $170.00 and up.



DUST COLLECTING!

Unit Dust Collector stops dust at its source, minimizes machine wear and tear, reduces housekeeping and general maintenance costs. Solves many grinding and polishing nuisances. Reduces material losses. Models from $286.00 and up.

PRECISION FINISHING!



Hydro-Finish Cabinet uses liquid blast, eliminating dust, and reduces costly hand polishing, cleaning and finishing of molds, dies, tools, etc. Removes scale, discoloration and directional grinding lines, prepares surfaces for plating and coating. Holds tolerances to .0001". Models from $1295.00 and up.

LOOK TO PANGBORN FOR THE LATEST DEVELOPMENTS IN BLAST CLEANING AND DUST CONTROL EQUIPMENT

Pangborn

MAIL COUPON for full details

(Check for more information)
☐ Blast Cleaning Cabinets
☐ Blast Cleaning Machines
☐ Unit Dust Collectors
☐ Hydro-Finish Cabinets

PANGBORN CORP., 2400 Pangborn Blvd., Hagerstown, Md.

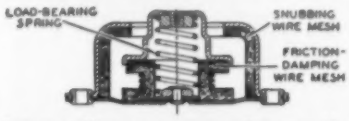
Gentlemen: Please send me more information on the equipment I've checked at the left.

Name.....
Company.....
Address.....
City.....Zone.....State.....

▲ For more details circle NED-7748 on enclosed inquiry slip ▲

VIBRATION ISOLATORS
withstand aircraft shock landings

Added to line of All-Metl unit vibration isolators for mounting aircraft electronic equipment are mounts covering load ranges of 8 to 16 lb, 14 to 25 lb and 22 to 35 lb. Units are available in 6600, 6600R, 6645 and 6645R series. Latter two series have center studs 5/32 in. longer than corresponding units in 6600 and 6600R series and may be attached directly to equipment instead of requiring dimples at mounting holes. Both R series units withstand shocks such as those met in aircraft carrier-arrested landings and in crash landings, and meet specification AN-E-19 for equipment sizes listed in JAN-C-172A. All units are relatively unaffected by temperature extremes. Made by **Barry Corp.**, 852 Pleasant St., Watertown 72, Mass.



▲ For more details circle NED-7749 on enclosed inquiry slip ▲

TIMING MOTOR
400-cycle unit for light loads

Of hysteresis type, this 400-cycle synchronous timing motor is designed for light loads as separate component or in variety of standard timers. At any given frequency, control is accurate because variations in temperature, supply voltage and load, within operational limits of motor, do not affect timing. As motors follow frequency changes, degree of accuracy is matter of regulation. Radio frequency filtering or shielding is not required. Made by **Haydon Mfg. Co.**, 9247 Elm St., Torrington, Conn.

▲ For more details circle NED-7750 on enclosed inquiry slip ▲

STEEL WORK BENCH
with laminated or steel top

Designed for all types of heavy bench work, model 9192 Scotty work bench is offered with heavy steel or Nat-Flex tops, latter being made up of layers of wood, pressure-laminated and topped by tough, surface-sealed plastic base composition. This surface is nonconducting; resistant to oil, grease, water and abrasion; and will not fracture. Bench has 10-sq ft top, with full steel storage shelf beneath. It is of heavy gage steel construction, with leg and shelf corners welded. Front of bench provides toe space. Top is large and strong enough to support vise, bench lathe or other shop equipment. Dimensions are 60 x 24 x 33⅝ in. Made by **Natkin & Co.**, 1601 S. Hanley Rd., St. Louis 17, Mo.

▲ For more details circle NED-7751 on enclosed inquiry slip ▲

UNIVERSAL
INDUSTRIAL CONVEYOR
Low First Cost . . . .
Low Maintenance

- Removable sides to permit handling large cartons or parts.
- Motor totally enclosed inside conveyor body easily accessible through removable ventilating panel.
- Elevates to desired height with simple hoisting mechanism.
- Driven by means of roller chain to roller bearing equipped gear box.
- Main drive shaft and idler pulley operate on double-sealed ball bearing.
- Standard belt width, 12 inches. Other widths can be furnished to meet your requirements.
- Belt speed, 74 F.P.M.—adjustable if desired.

INDUSTRIAL ENGINEERING & MFG. CO., INC.
BRIMFIELD, INDIANA, U.S.A.

▲ For more details circle NED-7752 on enclosed inquiry slip ▲

Try the MODERN
SAFETY DRILL TABLE

For Faster, SAFER Work in Your Maintenance Department

Combines a drill table, a vise, a set of parallels and V block. No more lost fingers from hand held jobs that slip. No more 30 minute set-ups for a 1 minute drilling operation. Made in 6 sizes from 8" to 28" dia. We guarantee each Safety Drill Table will save its cost on labor alone in 6 months, to say nothing of plant down time when vital maintenance is delayed even a few minutes.

FREE TRIAL OFFER

WRITE FOR FREE FOLDER

Shows many typical set-ups and use on radial drills. Complete specifications on all models. Covers MONEY BACK GUARANTEE and 30 DAY FREE TRIAL OFFER.

MODERN MACHINE TOOL CO.
Jackson, Michigan

▲ For more details circle NED-7753 on enclosed inquiry slip ▲

AMES HAS THE BETTER ANSWER to your Long Range Problem

MODEL NO. 2822

Ames Long Range Dial Indicators are doing a better job on those difficult quality control jobs which require long range close tolerance inspection. Problems such as those involving measurement of slide motions, cam travel, or checking the depth of recesses and penetrations are easily and accurately solved with Ames Long Range Dial Indicators. Models are available having ranges from ½" to 12". Some dials graduated in .001", some in .0005". Other models graduated in .0001". Write for detailed information or send your problem to Ames Engineering Department. There is an Ames Gauge or Indicator to solve practically any measuring problem controlling quality of process or product.

Representatives in principal cities. **B. C. AMES CO.** 54 Ames Street Waltham 54, Mass.
Mfgr. of Micrometer Dial Gauges • Micrometer Dial Indicators

▲ For more details circle NED-7754 on enclosed inquiry slip ▲

SPEEDS POLISHING, GRINDING and BUFFING

- Amazing grinder head speeds grinding, polishing, buffing and snagging operations. **Prove it** yourself with free trial! Write us NOW.

NU-MATIC GRINDERS

$17.50 each
F.O.B. Cleveland
(Wheel with abrasive band, only)

Send for FREE Illustrated Literature

- Just inflate the rubber drum with 3 to 10 lbs. air pressure, depending on operation. You easily vary the air pressure as well as type and number of grit . . . to achieve an infinite variety of operations on any surface. Dynamic balance . . . no chatter or bounce. Eliminates hand filing. Faster, better, easier . . . on stands, portable tools, backstand idlers . . . wherever ordinary grinders are used . . . on any kind of surface. On flat surfaces, Nu-Matic presents far greater contact area because Nu-Matic is resilient! And it produces a straight pattern . . . like a hand finish. Write NOW for your 25-day FREE TRIAL, complete instructions and illustrated literature. Send trial purchase order, or request a trial Nu-Matic on your letterhead. No obligation. Nu-Matic Grinders, Inc., 8223 Carnegie Ave., Cleveland 3, Ohio.

▲ For more details circle NED-7755 on enclosed inquiry slip ▲

HERMAN NELSON DE LUXE I MODEL PORTABLE HEATER

Electric motor powered.
Uses kerosene for fuel.
280-450,00 BTU capacity.
Completely automatic operation.
Automatic temperature control.

SAFE AND SURE PORTABLE HEAT!

...for Construction and Standby

A HERMAN NELSON Portable Heater supplies quick, safe, economical heat . . . for scores of uses. Heats and ventilates buildings under construction, storage, sheds, repair shops . . . thaws machinery and equipment, dries plaster or protects concrete pours. Widely used for aircraft ground service—both commercial and military, Herman Nelson units are easily moved and operated by one man. Superior features include "*sealed flame*" . . . eliminates dangerous fumes and fire hazards. Available in many models, types, and capacities.

Plan your heating requirements now! For full details write Dept. ND-10

HERMAN NELSON

Division of AMERICAN AIR FILTER COMPANY, INC.
MOLINE, ILLINOIS

For more details circle NED-7756 on enclosed inquiry slip

ARCCO... NOW OFFERS 8 DAY CHARTS and ROCKWELL CHART DRIVES

EIGHT-DAY ARCCO CHARTS are now available for use on practically all Rockwell-Emco, Foxboro and Westcott orifice meters. Eight day charts for other instruments soon available.

With this NEW Chart Drive 11 rotation speeds are possible. Turrets are available for 2, 3, 4, 6, 8 and 12 hours, also for 2, 3, 7, and 8 day rotation. Standard hub gives 24 hour rotation.

ROCKWELL CHART DRIVES are ruggedly built and are sealed for years of trouble-free service. The drives are adaptable to practically every type of instrument using circular charts. The price is $11.55 each. Turrets are $3.85 each F.O.B. Los Angeles Calif. or Tulsa, Oklahoma.

AMERICAN RECORDING CHART CO.
3113 E. 11th St. • Los Angeles 23, Calif.

SEND FOR DRIVE AND CHART BULLETIN

For more details circle NED-7757 on enclosed inquiry slip

4 STAR TIMER

- ★ No false contacts
- ★ No chatter
- ★ Quiet in operation
- ★ Eliminates double contacting or breaking of circuit

HYDROGEN PACKED

Durakool
STEEL MERCURY TIMERS

The steel-clad "fixed time" Durakool timer-relay operates in "sealed in" hydrogen under pressure, with mercury to mercury contacts. Timing is tamper-proof. Non-breakable and built for millions of contacts. Fixed time delays available from 1/6 to 20 seconds, either normally open or normally closed action.

See Telephone Directory for Local Distributor or write
Durakool, Inc. Elkhart, Indiana

Send for Bulletin 800

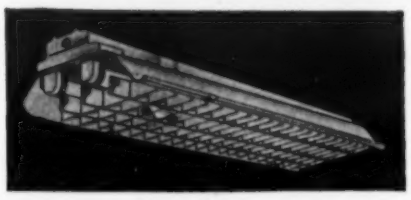
For more details circle NED-7758 on enclosed inquiry slip

PEG RACK TRUCK
keeps parts separated in transit

Of all welded heavy steel construction, this peg rack truck with 90 pegs holds armatures, rotors, gears and other parts, protecting them from damage caused by striking one another in transit. Cushioning racks are inclined at 15 degrees to hold parts. Trucks are furnished with 5 or 6-in. roller bearing rubber tired casters. Pegs are 7-in., ⅜-in. square steel bars covered with ¾-in. oil-resisting block fiber tubing. Ends are beveled and leather belting at base provides bottom cushioning. For large size parts, trucks can be furnished with fewer pegs spaced farther apart. Made by **Lloyd Engineering Co.,** 60 Stephen St., Belleville 9, N. J.

For more details circle NED-7759 on enclosed inquiry slip

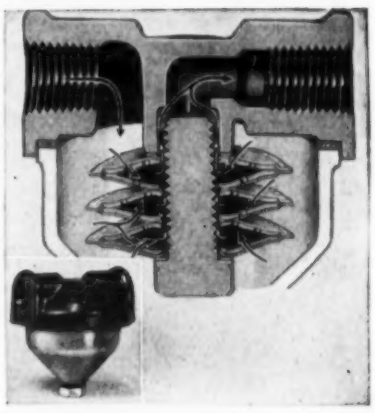
FLUORESCENT FIXTURES
all white inside and outside



Strong shadows and contrasts are avoided by Wyte-Liner fluorescent fixtures which are all white inside and outside. White reflector surface is 300-degree Permalux or porcelain enamel. Fixtures are offered in two and three 40-w light units for 4 and 8-ft slimline lamps and in 4 and 8-ft lengths. Made by **Edwin F. Guth Co.,** 2603 Washington Ave., St. Louis 3, Mo.

For more details circle NED-7760 on enclosed inquiry slip

GASOLINE FILTER
lightweight unit removes dirt, rust

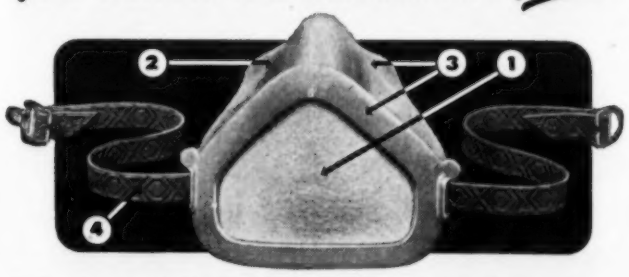


Exterior and cross-sectional views of Sparkler Rayclean

Made with cast aluminum top and aluminum alloy bowl, Rayclean model MB gasoline filter weighs 3¼ oz, making it light enough to be supported by fuel line alone. Its 2 x 2¼-in. size allows installation anywhere in fuel line. Microscopic particles of dirt and rust are trapped by nonwoven rayon cloth which covers each filter disk. All parts are rust resistant and unit will withstand heavy service. Capacity of filter is ample to accommodate all cars and trucks. Metal bowl provides large trap chamber to hold water extracted from gasoline. Made by **Sparkler Mfg. Co.,** 203 Lake St., Mundelein, Ill.

For more details circle NED-7761 on enclosed inquiry slip

4 Reasons why FLEX-A-FOAM (and *only* FLEX-A-FOAM) provides Dust Protection your workers will welcome and *Wear*



1. Pure latex washable filter purifies the air of non-toxic nuisance dusts as small as 1/25000 of an inch — yet it's easier to breathe and talk through than an ordinary pocket handkerchief! Out-wears throw-away type filter as much as 100 to 1.

2. Perfectly contoured for self-adjusting fit to every size and shape of face—designed for wear with spectacles or goggles with perfect comfort.

3. Positive-locking frames of polyethelene plastic, so flexible and tough they're unbreakable in normal usage. Complete mask weighs only 1 ounce. Attractively styled to suit the most discriminating wearer.

4. Defiance non-skid, natural rubber head-band with adjustable hook-and-eye fasteners holds mask firm and comfortably snug without tension or hair-pulling.

FLEX-A-FOAM FILTER MASK

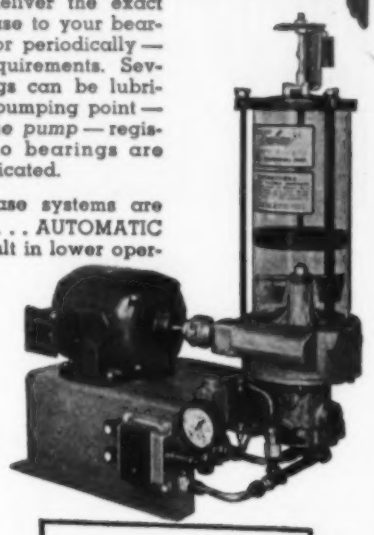
Sample $1.40 postpaid
★
Write for new descriptive folder

THE GOGGLE PARTS COMPANY • CLEVELAND 13, OHIO

For more details circle NED-7762 on enclosed inquiry slip

Trabon SYSTEMS ASSURE CONTINUOUS, UNIFORM *Lubrication*

• Trabon systems deliver the exact amount of oil or grease to your bearings — continuously or periodically — according to your requirements. Several hundred bearings can be lubricated from a single pumping point — one indicator — *at the pump* — registering proof that no bearings are skipped or underlubricated.



Trabon oil and grease systems are SAFE . . . POSITIVE . . . AUTOMATIC . . . SEALED . . . result in lower operating costs, increased production and protection to men and machinery.

Backed by 20 years of experience in engineering and installing lubrication equipment, Trabon can save thousands of dollars for you. Write Trabon Engineering Corporation, 1814 East 40th Street, Cleveland 3, Ohio.

Trabon
OIL AND GREASE SYSTEMS

For more details circle NED-7763 on enclosed inquiry slip

Pangborn DUST CONTROL

Turns Dust Into Profits!

A At Flury Foundry, this small and inexpensive Pangborn Dust Collector stops dust caused by blast cleaning operations . . . pays its own way in increased efficiency.

B At Dodge Cork Company, a Pangborn Dust Control System salvages $5000.00 worth of cork dust every year from some 40 sawing and polishing machines.

C At Landers, Frary & Clark, a Pangborn Dust Collector like this traps 522 cu. ft. of cast iron dust per day . . . company records prove maintenance costs are lower than ever before.

Dust is no problem for plants with Pangborn Dust Control. As these three cases (picked from hundreds in our files) show, a Pangborn Dust Control System *saves money* on maintenance when dust is a nuisance, saves money when dust has salvage value.

FIND OUT TODAY

how you can *save money* with Pangborn Dust Control. Write for your copy of Bulletin 909-A to: PANGBORN CORPORATION, 2400 Pangborn Blvd., Hagerstown, Maryland.

Look to Pangborn for the Latest Developments in Dust Control and Blast Cleaning Equipment.

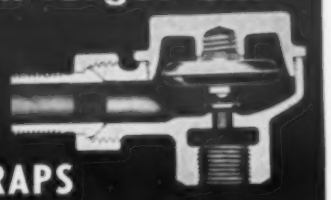
Pangborn DUST CONTROL

STOPS THE DUST HOG from stealing profits

For more details circle NED-7764 on enclosed inquiry slip

we set 'em
so you can forget 'em

DUNHAM



RADIATOR TRAPS

Non-clogging • Tight-seating • Free-draining

Once you install a Dunham Trap, it's in to stay. No further adjustment is needed. Each trap is factory set —permanently—for most effective condensate drainage; square, tight seating.

Dunham thermostatic disc, sealed under high vacuum, assures sensitive, positive response to temperature and pressure changes.

Floating valve and rounded, non-clogging seat design assure tight closure with minimum wear. Ball swivel joint between valve and disc prevents localized stresses on disc; prolongs valve and seat life.

For complete information about long-lasting, leak-proof Dunham Traps, WRITE FOR FILE NO. 1501-14.

DUNHAM

C. A. Dunham Co.,
400 W. Madison St. Chicago 6, Ill.
In Canada:
C. A. Dunham Co. Ltd., Toronto
In England:
C. A. Dunham Co. Ltd., London

HEATING SYSTEMS AND EQUIPMENT

▲ For more details circle **NED-7765** on enclosed inquiry slip ▲

A New Machining Method
SAVES 4.07 HOURS ON EACH 100 PIECES

PORTER-CABLE ABRASIVE-BELT MACHINING

The Piece: Aluminum base plate for electric saw.

The Job: To grind a 45° bevel on one edge.

Previous Method: Plates beveled one at a time on milling machine. Production: 4.54 hrs. per 100 pieces.

Present Method: Work placed on Porter-Cable Wet-Dry Belt Grinder with Automatic Feed Table, Model BG8 — FT9. Simple fixture with one holding clamp holds six pieces. An 80 grit silicon carbide belt is used wet.

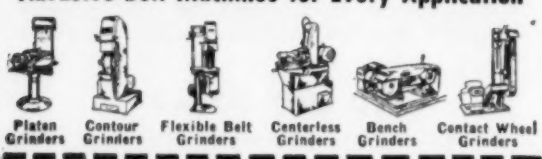
Result: Loading and unloading time cut 83%. Production: .47 hrs. per 100 pieces—*a saving of 4.07 hrs.* Extra bonus: 89¢ of each dollar spent on milling is saved!

Porter-Cable's BG8 Wet-Dry Belt Grinder often greatly steps up output of work now being milled, shaped, planed or wheel ground. Uses simpler fixtures . . . provides quicker set-ups—holds close dimensional limits. Large surfaces, especially those having a dispersed pattern of bosses, completed by one presentation to belt.

Model BG8-FT9 (with Automatic Feed Table)

Send for free booklet—shows how Abrasive-Belt Machining speeds production. Reduces costs on many operations.

Abrasive-Belt Machines for Every Application



Platen Grinders · Contour Grinders · Flexible Belt Grinders · Centerless Grinders · Bench Grinders · Contact Wheel Grinders

PORTER-CABLE MACHINE COMPANY
6030 N. Salina St., Syracuse 8, N. Y.

Please send me your free booklet: "Abrasive-Belt Machining."

Name.....
Address.....
City..... State.....

Mfgrs. of SPEEDMATIC and GUILD Electric Tools

In Canada write: Strongridge, Ltd., St. Catharines, Ont.

▲ For more details circle **NED-7766** on enclosed inquiry slip ▲

STAINLESS STEEL TRUCK for chemical and textile handling

Stainless steel throughout, these 1000-lb capacity trucks are finished and polished inside to resist corrosion. Corners are rounded for easy cleaning and top edges are reinforced with triangular pieces of formed metal to stiffen sides and resist damage. Removable plug (optional) allows contents to be drained. Supporting structure may be of stainless or structural steel, galvanized or painted, and can be attached permanently or as removable unit. Measuring 60 x 26½ x 16½ in., truck is furnished with swivel or rigid casters of cushion or hard rubber, aluminum, plastic or semisteel wheels. Made by **Market Forge Co.,** 54 Garvey St., Everett 49, Mass.

▲ For more details circle **NED-7767** on enclosed inquiry slip ▲

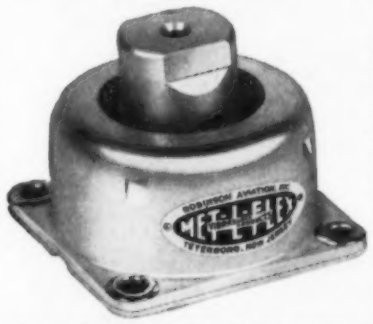
MACHINE TOOL COVERS of plastic keep out water and dust

Harmful action of grease, water and dust can be kept from machine tools by this maroon plastic waterproof cover, made with machine-stitched bound edges for durability. Suited for factories, machine shops, garages and other locations where machinery is standing idle, plastic covers are made in six sizes: 12 x 28 x 28 in., 21 x 37 x 24 in., 32 x 48 x 17 in., 32 x 60 x 17 in., 38 x 72 x 25 in. and 38 x 96 x 25 in. Use can be on any make machines. Made by **South Bend Lathe Works,** 307 E. Madison St., South Bend 22, Ind.

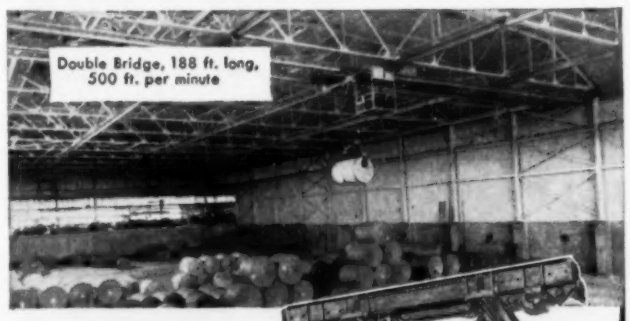
▲ For more details circle **NED-7768** on enclosed inquiry slip ▲

VIBRATION ISOLATION MOUNT for aircraft electronic equipment

All-metal construction and dependability are features of small Met-L-Flex size 1 cup-type unit mount used for mounting electronic equipment in military and commercial aircraft. Designated as series 7001, mounts are available in five load ranges from ½ to 10 lb. Other features include built-in damping with auxiliary cushioning for overload and shock, and good vibration isolation through temperature range of −90 to 175° C. Mount supplements larger size 2 cup type metal mount, series 7002. Made by **Robinson Aviation, Inc.,** 48 Industrial Ave., Teterboro, N. J.



▲ For more details circle **NED-7769** on enclosed inquiry slip ▲



FAST OPERATION . . .
CONSTANT SERVICE

AMERICAN MONORAIL *CRANE*

This new American MonoRail Crane is ruggedly built to handle loads up to 10 tons at operating speeds of 500 feet per minute. Articulated trolleys assure perfect alignment of trucks for smooth crane travel.

Let an American MonoRail engineer tell you how you can get fast, constant service not only on the craneways, but also through adjacent areas by way of interlocking MonoRail systems.

THE AMERICAN MONORAIL COMPANY
13116 Athens Avenue • Cleveland 7, Ohio

▲ For more details circle **NED-7770** on enclosed inquiry slip ▲

ACROMARK MEANS "ACCURATE MARKING"

FILL DESIGN AND LETTERING WITH ENAMEL MECHANICALLY

ASK FOR—
THE **ACROPRINTER**
Reg. U. S. Pat. Off.

MADE IN SEVERAL SIZES
MANUALLY OR POWER OPERATED
CONSTANTLY IMPROVED

The ACROMARK Company

WRITE TO—7-11 MORRELL ST., ELIZABETH 4, N. J.
"THE ORIGINAL MARKING SPECIALISTS"

▲ For more details circle **NED-7771** on enclosed inquiry slip ▲

The New, Improved Hydraulic

PULLEY PULLER

Enables one man to remove a pulley, gear, pinion, or other object from a shaft in minutes! No crow bars, sledges, or blow torches. No damage. Puller is adjustable, easily moved, rugged. Hundreds now in use in industry.

5-ton size **$62.50**
★
20-ton size **$290.00**
★
50-ton size **$655.00**
(F.O.B. Factory)

Write for complete information — Catalog

INDUSTRIAL ENGINEERING EQUIPMENT CO.
122-124 E. 4th St. Davenport, Iowa

▲ For more details circle **NED-7772** on enclosed inquiry slip ▲

How you can **REPAIR CONCRETE FLOORS QUICKLY**

Fill up cracks, ruts, shallow holes, uneven spots, etc. in concrete floors with Smooth-On No. 7B Quick Floor Patch Cement. The patch will harden quickly, adhere strongly to an old floor, and is ready for use as soon as it is hard.

Anyone can apply Smooth-On No. 7B by following the simple directions that come with it. The patches will stay tight, because Smooth-On No. 7B expands slightly as it hardens and wedges the patch securely in place.

Order Smooth-On No. 7B Quick Floor Patch Cement in 1-, 5-, 20- or 100-lb size.

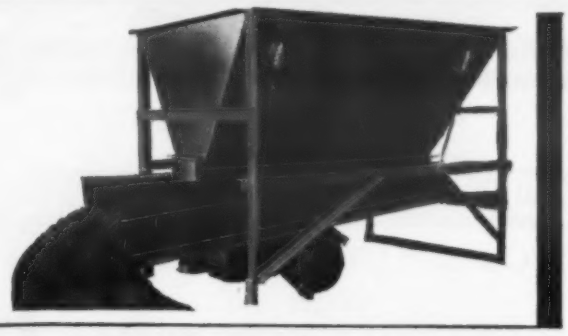
FREE Floor Patch Folder and Metal Repair Handbook

Folder gives full information on Smooth-On No. 7B Quick Floor Patch Cement. With it we'll send you the famous 40-page Smooth-On Repair Handbook, full of time-saving, money-saving repairs on plant and home equipment. Send now.

SMOOTH-ON MFG. CO., DEPT. 10
570 Communipaw Ave., Jersey City 4, N. J.

Do it with **SMOOTH-ON QUICK FLOOR PATCH CEMENT**

▲ For more details circle **NED-7773** on enclosed inquiry slip ▲



If you use bin-stored materials you can handle them better with a Simplicity Os-A-Veyor type bin feeder

If you move anything that can be stored in a bin, chances are a Simplicity Os-A-Veyor type bin feeder will cut handling costs and speed up your operations. Simplicity Bin Feeders practically eliminate bridging and stoppage because they feed from the full length of the bin—materials will flow as you need them. Simplicity bin feeders are ideal, too, for storing and moving materials that are improved by tempering. Simplified power and operating mechanism keeps maintenance costs low, makes servicing easy. Write us today for complete information.

Simplicity ENGINEERING CO., DURAND, MICH. 101

For more details circle NED-7774 on enclosed inquiry slip

FLEXIBLE AS STRING . . . GLASS-CLEAR . . . FEATHER-LIGHT . . . FULLY RESISTANT TO ACIDS, ALKALIES, OILS, GREASES, AND WATERS . . . MIRROR-SMOOTH . . . TOUGH AS LEATHER . . . NON-OXIDIZING . . . NON-TOXIC . . . LONG-WEARING . . . FOR THE TRANSMISSION OF LIQUIDS, GASES, AND SEMI-SOLIDS.

TYGON Tubing is available in six standard compounds — continuous lengths — bores up to 2" ID — with or without outer braid reinforcement. Special compounds and sizes made to order.

Write, today, for detailed information and technical Bulletin T-77!

202C

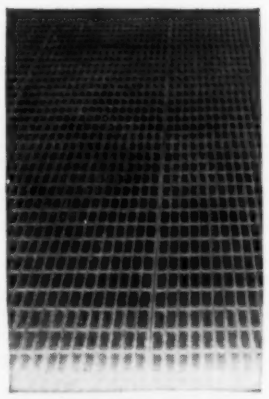
U. S. STONEWARE
AKRON 9, OHIO
PLASTICS AND SYNTHETICS DIVISION

For more details circle NED-7775 on enclosed inquiry slip

FIRST EXAMINE . . . THEN SELECT THE GRATING WITH ALL 5 SUPERIOR FEATURES!

1. STRONG electroforged construction for easy installation.
2. MAXIMUM OPEN AREA for light and air.
3. EASY TO MAINTAIN . . . paint reaches entire surface.
4. SELF-CLEANING, no sharp corners to clog.
5. SAFE footing at all times with twisted cross bar.

Write for complete specifications

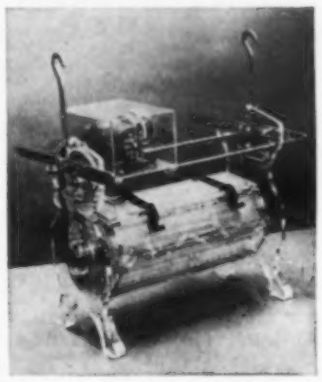


BLAW-KNOX DIVISION OF BLAW-KNOX COMPANY
2068 Farmers Bank Building
Pittsburgh 22, Pa.

BLAW-KNOX *Electroforged®* STEEL GRATING AND STAIR TREADS

For more details circle NED-7776 on enclosed inquiry slip

PORTABLE PLATING BARREL equipped with Plexiglas cylinder



Light in weight and easily handled, this Mercil portable plating barrel with Plexiglas cylinder is adaptable to processing of small parts. It is made with 6 x 12 and 8 x 18-in. cylinders. Rheostat allows operation at various speeds. Cylinder, legs and gears are of Plexiglas. Unit is powered by 1/15-hp motor and is suitable for operation on 110 or 220-v, single phase, 60-cycle power. It can be used with acid or alkaline solutions with bath temperatures not exceeding 180-185° F. Made by **Hanson-Van Winkle-Munning Co.**, W. Church St., Matawan, N. J.

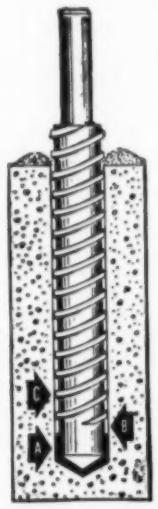
For more details circle NED-7777 on enclosed inquiry slip

MARKING UNIT ink writes on porous, vitreous items

Marking with equal ease on porous and nonporous or vitreous surfaces, Magic Marker throw-away-bottle marking unit makes use of Speedry ink which drys instantly and is water proof and launderproof. Device writes with felt tip designed to permit fine, medium and bold marking. When ink supply is exhausted, nib section is unscrewed from bottle and attached to new bottle. Ink is made in nine colors including black and white. Marker itself is spillproof. Made by **Speedry Products, Inc.**, 19-H Rector St., New York 6, N. Y.

For more details circle NED-7778 on enclosed inquiry slip

MASONRY DRILL has double lead spiral dust grooves



Machined from the solid with round nose supporting carbide tip, Speed Spiral masonry drill is designed to provide ample dust clearance without gashing ahead of carbide tip. Double lead fast spiral dust grooves are made extra deep for long life. They pick up dust immediately behind carbide tip. Dust load automatically distributes itself in spirals. Holes up to 12-in. deep can be drilled without stopping or removing tool from hole. In illustration, A refers to carbide tip in round nose, B to open area which permits easy pick-up and fast removal of dust, and C to deep dust channels and full hole size drill body. Made by **Super Tool Co.**, 21640 Hoover Rd., Detroit 13, Mich.

For more details circle NED-7779 on enclosed inquiry slip

WILLSON Safety Goggles

Keep You on the Safe Side

Style TAW50 for heavy duty with

- WILLSON Super-Tough® lenses
- Comfort-fitting eye cups
- Adjustable chain bridge
- Side screen ventilation
- Lenses easily replaceable

More than 300 other Eye and Respiratory Safety Devices carry this trademark

WILLSON® *Dependable Products Since 1870*

WILLSON PRODUCTS, INC., 219 Washington St., Reading, Pa.

For more details circle NED-7780 on enclosed inquiry slip

Portable Tester

50,000 VOLTS 5 KVA

This is one of our most popular a-c testing equipments—suitable for testing motors up to approximately 200 hp and transformers up to about 2500 kva.

Operates on 60-cycle, 115/230-volt supply. Provides smooth, stepless test voltages over the entire range from practically zero to 50 kv. Has accurate, double-scale voltmeter and is equipped with an air circuit breaker with overload trip. Safety features—including foot switch, grounding lead, screen, and signal lamp—protect operators.

All wheels are equipped with roller bearings. Projected floor space is 41" x 26"—over-all height is 44".

For information on G-E's complete line of portable a-c high-potential test sets, write for Bulletin GEC-612, *Apparatus Dept., General Electric Company, Schenectady 5, N. Y.*

GENERAL ELECTRIC
401-85

For more details circle NED-7781 on enclosed inquiry slip

BOOST OUTPUT with *Impact* AIR HAMMER

the efficient modern method for

PUNCHING . . . . . RIVETING
ASSEMBLING . . . . EMBOSSING
FORGING . . . . . FORMING
PEENING . . . . . MARKING
CRIMPING . . . . . CUTTING
BLANKING . . . . . COINING

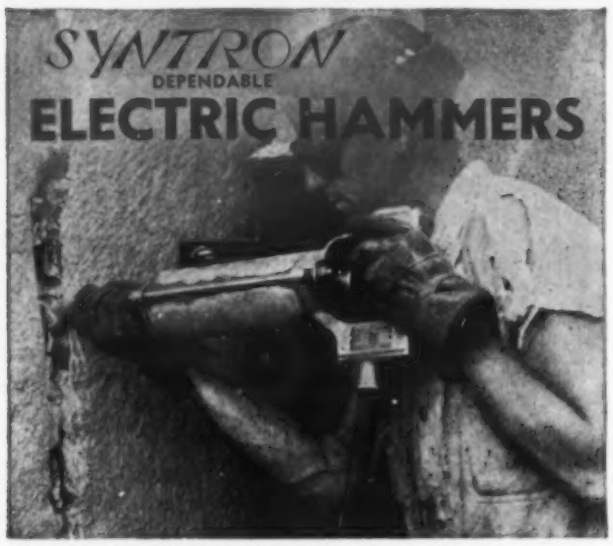
Ready . . . Mead's new air-powered Impact Hammer . . . weighing only 27 pounds . . . yet having a wallop like a pile-driver! One of its outstanding applications is multiple piercing of large metal sheets before or after forming. It can punch holes as close together as 1¾" on centers. Value of the impact readily adjusted from 4,500 pounds down to only a few ounces. Set ups are quick, easy. Besides innumerable punching operations, with suitable attachments it is capable of upsetting rivets, blanking out soft materials with knife dies, light coining, forging operations, etc. Get complete facts on this versatile, handy new tool and other Mead Air Power devices. Write for Catalog.

MEAD AIR OPERATED DEVICES *save precious man-hours!*

CATALOG READY
Send for copy of our new Air Power Catalog illustrating, describing many new man-and-money-saving devices.

MEAD SPECIALTIES COMPANY
4114 NORTH KNOX AVENUE
DEPT. NA-101 • CHICAGO 41, ILL.

For more details circle NED-7782 on enclosed inquiry slip



Bring Production Speed to those Maintenance and Installation jobs that require
DRILLING
CUTTING
CHIPPING in Concrete and Masonry

3600 powerful blows per minute make short work of such jobs—save time and money—reduce fatigue.

Write for illustrated folder.

SYNTRON CO.
405 Lexington Ave. Homer City, Pa.

For more details circle NED-7783 on enclosed inquiry slip

DRILL JIG
improved model more easily adjusted

Design changes incorporated in this improved drill jig include more easily adjustable combination stop which can be used on either right or left side. This stop makes it possible to feed all work in same direction and make changes from drilling cap screws to drilling round or hex stock at any distance from end by changing only V-block. This block is flame hardened cast iron and is so designed that it can be easily picked up and turned by ring on block. Jig (*originally described in NED, Feb. '51*) eliminates layout and cuts drilling time on small lots. It can be used for drilling holes through round and hex stock from ¼ to 2 in. and for cap screws from ¼ to 1¼ in. Made by **Mathewson Machine Works, Inc.**, 4 Hancock St., North Quincy 71, Mass.

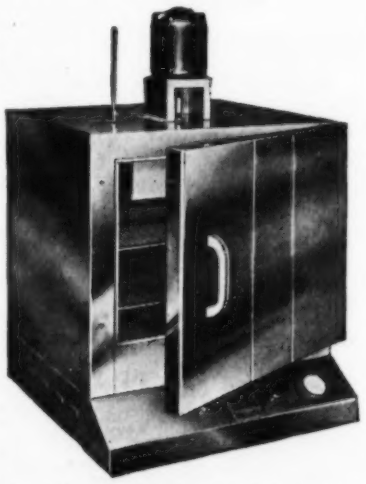
For more details circle NED-7785 on enclosed inquiry slip

ALUMINUM SOLDER ROD
developed for soldering iron use

Melting at 400° F and flowing at 450° F, No. 37 aluminum solder rod is made for soldering iron applications, but can be applied by any indirect heating method. Lead-free solder is used with No. 37 Brazaloy flux and will withstand pressures of 1000 psi when properly applied. It is for work on all types of aluminum except 24ST and will also join aluminum and dissimilar metals. Possessing good matching color and corrosion resistance, No. 37 rod is offered in ⅛ x 18-in. and ¼ x 14-in. sizes in 5-lb packages. Made by **All-State Welding Alloys Co.**, 273 Ferrisden Ave., White Plains, N. Y.

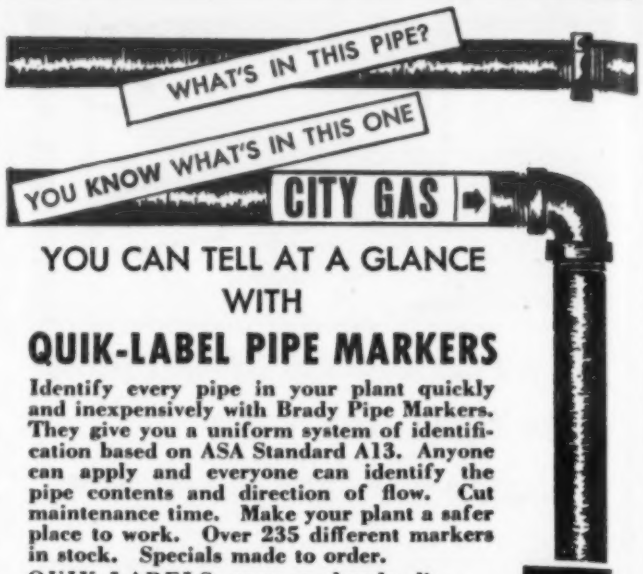
For more details circle NED-7786 on enclosed inquiry slip

LABORATORY OVEN
uses continuous air circulation



Particularly adapted to laboratory heating applications, this forced draft oven is electrically operated. Multi-blade blower wheel, driven by ball bearing motor, provides continuous circulation of air inside heating chamber to assure equal heat distribution and uniform heating of contents. Power selector switch permits instant selection of low, medium or high current input, and adjustable thermostat controls temperature at desired level. Fully insulated oven is constructed of type 302 stainless steel both inside and outside. Made by **Schaar & Co.**, 756 W. Lexington St., Chicago 7, Ill.

For more details circle NED-7787 on enclosed inquiry slip



YOU CAN TELL AT A GLANCE WITH

QUIK-LABEL PIPE MARKERS

Identify every pipe in your plant quickly and inexpensively with Brady Pipe Markers. They give you a uniform system of identification based on ASA Standard A13. Anyone can apply and everyone can identify the pipe contents and direction of flow. Cut maintenance time. Make your plant a safer place to work. Over 235 different markers in stock. Specials made to order.

QUIK-LABELS come on handy dispenser cards. They are printed in large black letters on approved ASA background colors. Applied in a jiffy—they stick without moistening. Use indoors or outdoors. Cost only a few cents per marker.

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DISTRIBUTORS IN OVER 125 PRINCIPAL CITIES

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MANUFACTURERS OF SELF-STICKING PRODUCTS
W.H. BRADY COMPANY
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For more details circle NED-7789 on enclosed inquiry slip

All these are "LOW PRESSURE" AIR JOBS--

Agitating—blowing—holding—chucking—sorting—cleaning—drying—cooling—separating—mixing—feeding—leak-testing—pressure-boosting—materials transfer, etc.

-handled Better, at Lower Cost, with

ON hundreds of air applications requiring pressures lower than 25 p.s.i. or vacuum under 29" mercury, Leiman Rotary Positive Air Pumps are providing these advantages over any other source of air:

- Even, pulseless flow of air.
- No expensive installation, no tanks.
- Air available instantly—no waiting to build up pressure.
- No waste — runs only when air is needed.
- Very compact and portable—plug in and use anywhere.
- Provides both pressure and vacuum-suction from same source, by switching from outlet to inlet.
- Extremely quiet and trouble-free for years.
- Little or no maintenance.

What is your operation or problem? Send us details for recommendation, without obligation.

TAKE UP THEIR OWN WEAR

Exclusive Leiman hinged wing design permits wings to wear uniformly, maintaining full pressure or vacuum, even after 15 and 20 years' steady service.

WRITE on firm letterhead for free catalog and application folder.

LEIMAN BROS., Inc. 167 Christie Street, Newark 5, N. J.

AIR PUMPS · AIR MOTORS · SAND BLASTS · DUST COLLECTORS

For more details circle NED-7784 on enclosed inquiry slip

SAFETY EQUIPMENT FOR ALL INDUSTRIES

IPCO WELDING CURTAINS

A SOUND INVESTMENT FOR PROTECTION OF PERSONNEL

Workers and passers-by are protected from harmful rays given off by welding operations. Also serve as a protective shield against flying chips and scale. Made of special flameproof and waterproof canvas—or asbestos—complete with eyelets for suspending on rod or pipe support.

SALVAGE COVERS AND FIRE BLANKETS ALSO AVAILABLE
WRITE FOR BULLETIN LA-101

IPCO Safety Equipment for all Industries
INDUSTRIAL PRODUCTS COMPANY
2807 N. FOURTH STREET • PHILADELPHIA 33, PA.

For more details circle NED-7788 on enclosed inquiry slip

HOW TO PUT THE "Freeze" on Pressure Reducing Problems... USE MASONEILAN Regulators

Production and maintenance men can count on Masoneilan Pressure Reducing Valves to give accurate control of steam, water or air. Constructed to high quality standard, they give long-lived service...require minimum of maintenance because they are *built up to the job* not down to price.

No. 33 for steam or air service — sizes from ½" to ¾". Reduced pressure ranges 2-20; 20-40; 40-100 psi. Maximum working pressure 200 lbs.

No. 227 for water service — sizes ¼" to 2". Reduced pressure ranges 10 to 60 psi. Maximum working pressure 150 psi. Also available for air service from ¼" to 1".

Your local Mason-Neilan Industrial Distributor is Ready to serve you from stock; or Write —

Mason-Neilan Regulator Company
1189 ADAMS STREET, BOSTON 24, MASS., U. S. A.

For more details circle NED-7790 on enclosed inquiry slip

Withstands temperatures from 500° to −85° F.

Originally developed to meet the drastic temperature range aircraft encounter, Varglas Silicone Electrical Tubing and Sleeving may be able to lick your tough insulation problems! Here's why: Varglas Silicone is . . .

- **Efficient at 500° F.** — flexible at −85°F.
- **Moisture-Resistant** — to lubricating oil, salt water, acids and mild alkalis.
- **Fire-Resistant** — non-flaming in nature.
- **Abrasion-Resistant** — pliable and non-fraying.
- **Dielectrically Strong** — average readings up to 7,000 volts.

Available in various NEMA colors in several types and grades of tubing, sleeving, lead wire and tying cord.

VARFLEX Sales Co., Inc.
310 N. Jay St., Rome, N. Y.

For more details circle NED-7791 on enclosed inquiry slip

BLACK DIAMOND
PRECISION DRILL GRINDER

SAVE MONEY ON EVERY USE OF SMALL DRILLS. REDUCE DRILLING COSTS—DRILL BREAKAGE—WORK REJECTS. SHARPEN ALL SMALL DRILLS WITH "THE ONLY" BLACK DIAMOND.

Black Diamond Grinders cut 50% and more on drill sharpening and drilling costs. They sharpen small drills so efficiently and accurately that drill breakage and work spoilage are tremendously reduced.

Anyone can operate a Black Diamond Grinder, can keep all small drills sharp—and true centered with smooth lips accurately ground to the same length, correct angle and clearance for fast, precision drilling.

The built in Diamond Point Dresser, is instantly available to keep the grinding wheel sharp cutting and the Web Thinning Attachment cares for all types of Notched Points.

If you use small drills, singly or in gangs, this moderately priced grinder will keep any quantity sharp, ready for use. You should own a Black Diamond. Write for New Bulletin.

BLACK DIAMOND SAW & MACHINE WORKS, INC.
NATICK, MASSACHUSETTS

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CUTTING PADS

Made of tough, "self-healing" TYGON plastic, COLONIAL Cutting Pads — 203C

1. Reduce die wear and breakage,
2. Lessen rejects from double cutting due to "bounce back",
3. Increase production through quiet, less fatiguing operation.

Long wearing, dustless, and usable on both sides, COLONIAL Cutting Pads are widely used in machine, or hand cutting of rubber, leather, plastics, cork, candy, paper, fibre, felt cloth, foils, or light gauge metals.

Available in 5 standard sizes: 20"x20"x⅜", 18"x36"x¾", 18"x36"x1", 20"x40"x¾", 20"x40"x1". Generous credit given for return, after full use.

Write, today, for full information and prices!

COLONIAL RUBBER CO.
RAVENNA, OHIO

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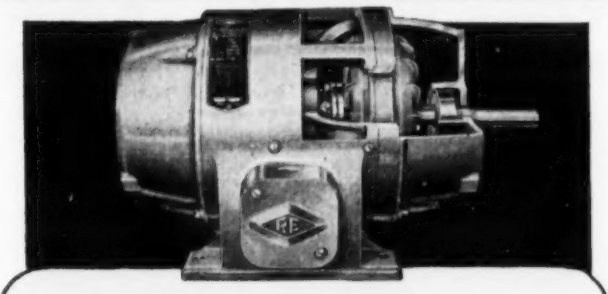


NEW *FLUID-SHAFT* MOTOR GIVES SMOOTH LOAD ACCELERATION ...ELIMINATES NEED FOR CLUTCHES!

Reuland Fluid-Shaft motor with double reduction gear reducer.

Write for new Engineering Folder No. 2000-10.

REULAND FLUID-SHAFT ELECTRIC MOTORS are the only units with an *integral fluid coupling*. Their cost is much less than a conventional motor with drive attachment, and their ability to "take it" has already been proved on heavy jobs, including mixers, centrifugals and cranes.

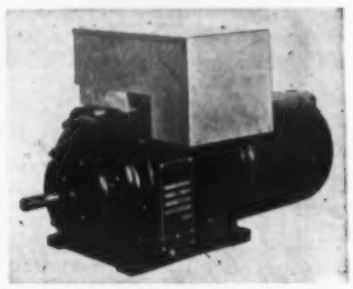
Fluid-Shaft motors accelerate heavy loads smoothly without the aid of mechanical clutches. Overloads are eliminated. *Will start heavier loads than regular motors of comparable horsepower!*

- Protection against "jamming"
- Reduces maintenance
- No need to overmotor to start heavy loads
- Wide H. P. range
- Uses less starting current
- Shorter mounting dimensions

REULAND ELECTRIC CO.
ALHAMBRA, CALIFORNIA • DISTRIBUTORS IN PRINCIPAL CITIES

▲ For more details circle NED-7794 on enclosed inquiry slip ▲

VARIABLE SPEED DRIVE
controllable from remote point

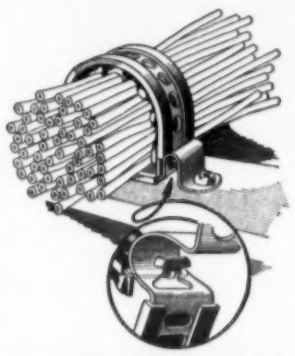


Remote electrical control of speed for line of infinitely variable speed transmissions in range of 1/12 to 5 hp is possible with packaged system. Hairline accuracy of speed setting from zero to full speed is possible. System consists of unit for mounting on transmission, remote pushbutton station and wiring. Remote speed indicator is optional. Reversing and nonreversing drives, transmissions with built-in or separate motors and speed reduction types can be fitted with this control. It is adaptable to existing Graham transmissions. Made by **Graham Transmissions Inc.**, 3753 N. Holton St., Milwaukee 12, Wis.

▲ For more details circle NED-7795 on enclosed inquiry slip ▲

WIRE BUNDLE CLAMP
opens and closes without tools

Bundles of wires are securely held by this wire harness clamp which can be opened and closed without tools. It is built with interlocking slot and tongue that cannot be opened accidentally. Made to be used singly or in tandem and to hold 5/16 to 1½-in. diameter bundles, clamp meets maximum loading requirements established by electrical groups in military aircraft. It can be opened without removal from structure and can be preassembled to wire bundle to facilitate installation. Screwdriver is used for mounting. Made by **Tinnerman Products, Inc.**, Dept. 14, Box 6688, Cleveland 1, O.



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PRECISION-MADE NAILS
produced to meet specific needs

Produced from wire ranging from 22 up to 10 gage, specially designed, precision-made nails are offered in lengths ranging from ¼ to 2½ in. Head sizes depend upon gage and type of wire, while head shapes are round, oval, conical, flat or countersunk. Nail points can be made to meet almost any requirement. Service offered by **Roberts Co.**, 1536A N. Indiana St., Los Angeles 63, Calif.

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NO ONE SPEED REDUCER SOLVES EVERY REDUCTION PROBLEM

That's why LINK-BELT builds all 3

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LINK-BELT COMPANY Chicago 9, Indianapolis 6, Philadelphia 40, Atlanta, Houston 1, Minneapolis 5, San Francisco 24, Los Angeles 33, Seattle 4, Toronto 8, Springs (S. Africa). Offices, Factory Branch Stores and Distributors in Principal Cities.

12,224

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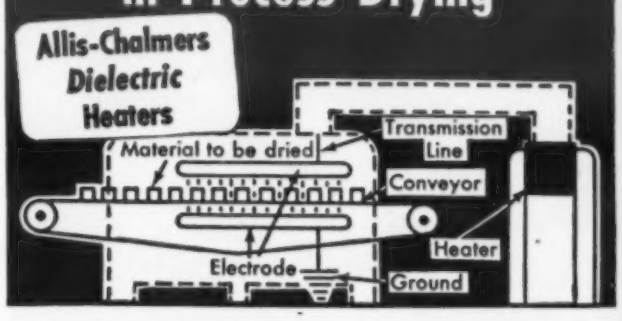
For Speed and Uniformity in Process Drying



ALLIS-CHALMERS dielectric heaters present interesting possibilities to manufacturers needing high speed, or uniform drying in their processes.

The standard ovens originally developed for core drying and twist setting can actually be used for drying many other products.

Allis-Chalmers dielectric heaters fit into production techniques. Continuous conveyors carry material between the electrodes for drying. Because drying time is a matter of minutes, and the oven is short, space requirements are considerably less than conventional conveyor type ovens, or batch ovens plus racks.

Get engineering and cost studies from your nearby Allis-Chalmers Office, or write Allis-Chalmers, Milwaukee 1, Wis.

A-3358

ALLIS-CHALMERS

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...for hazardous locations where flammable or explosive dusts are present. Class II, Groups E, F, G and Class III.

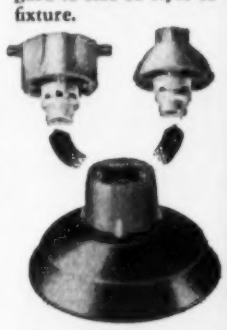
With 2 Exclusive Design Features

R & S Type DL Lighting Fixtures contribute outstanding advances in fixture construction and installation simplicity! They operate very cool—'way below allowable temperatures for this type of installation.

Two *exclusive* design features, in addition to basic advantages common to other well-constructed dust-tight fixtures, assure faster, easier installation, cleaning and relamping. They're made of cast aluminum alloy—designed with streamlined simplicity—and shaped to prevent dangerous accumulation of dust particles. Write for Data Sheet No. 7151-15.

- Pendent and Junction Box bases are standard to all fixtures. They will accommodate any style fixture—globe—reflector assembly in either 100 watt or 200 watt sizes, providing complete interchangeability.

1 Lampholders are located within the conduit box assembly of both pendent and junction box types, permitting installation and wiring without regard to size or style of fixture.



2 All fixture—globe—Reflector assemblies fit either base and are easily attached or interchanged by means of a simple bayonet slot and screw arrangement, without disturbing electrical connections.

RUSSELL & STOLL COMPANY, INC., 125 Barclay Street, New York 7, N.Y. C-6

RUSSELL & STOLL
PRECISION-BUILT ELECTRICAL EQUIPMENT—SINCE 1902

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THE KIND of information you want, right at your finger tips . . . on pneumatic, electric and electronic non-indicating controls for temperature, pressure and humidity.

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MINNEAPOLIS-HONEYWELL REGULATOR CO., *Industrial Division*, 4529 Wayne Ave., Philadelphia 44, Pa.

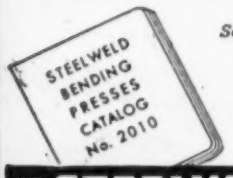
MINNEAPOLIS **Honeywell**
Brown Instruments

For more details circle **NED-7801** on enclosed inquiry slip

IF YOU WORK WITH PLATE YOU NEED A STEELWELD PRESS

If you work with metal in any thickness from 12 gauge to one inch most likely a Steelweld Press would prove helpful and profitable to you.

Steelwelds are versatile tools that do bending, forming, drawing, punching, etc. quickly with simple, easily set dies.



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THE CLEVELAND CRANE & ENGINEERING CO.
6638 East 281st St. Wickliffe, Ohio

STEELWELD PRESSES

For more details circle **NED-7802** on enclosed inquiry slip

NOW Handle Double-Faced Pallets EASILY with SERVICE LEVERLIFT

Here is the only pallet truck with tines which can enter your double faced pallets with no jockeying. Magic "Toggle Booster" rollers "float" truck frame and wheels over bottom face of pallet so gently that even an empty pallet isn't jarred out of position. Leverlift enables you to use *all* floor space where it's too crowded to work power-operated equipment. Here is the easiest and quickest hand-operated way to move palletized loads. *Write for detailed specifications today.*

SERVICE CASTER & TRUCK CORP.

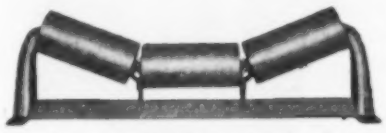
INDOOR MILES Rub EASIER and SAFER

Executive Offices: Albion, Michigan
Plants at Albion, Michigan and Somerville 43, Mass.
Representatives in all Principal Cities

For more details circle **NED-7803** on enclosed inquiry slip

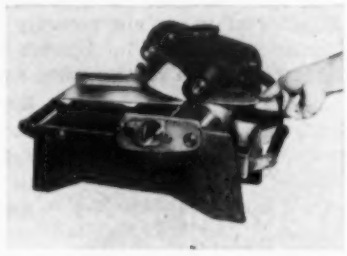
BELT CONVEYOR IDLERS high speed units are prelubricated

Sealed-in lubricant which operates with no appreciable change in viscosity from −90 to 200° F provides line of belt conveyor idlers with practically constant idler friction factor. Lubricant melts at 376° F and is inhibited against oxidation, emulsification and saponification. Combination of contact sealed, high speed, heavy duty ball bearings and special mounting features exclude foreign material and retain lubricant. Idler frame is steel, jig-welded constructed. Roll shafts are solid and extend completely through idler roll. They are mounted to eliminate all cantilever loading on roll ends. Low friction factor permits use of smaller diameter idler rolls without sacrifice in idler life. Made by **Transall Inc.**, 130 N. Eleventh St., Birmingham 4, Ala.



For more details circle **NED-7804** on enclosed inquiry slip

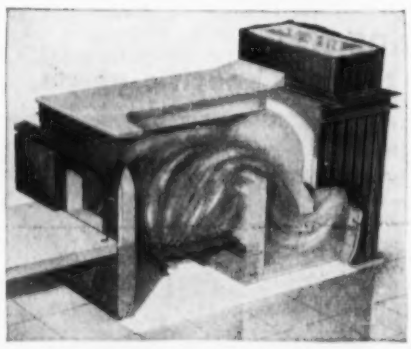
LATEX CEMENTING MACHINE handles materials up to 3 in. thick



Manufactured in widths of 1 to 12 in., this single roller latex cementing machine automatically adjusts itself to varying thicknesses of materials up to 3 in. Design incorporates 2-in. diameter driven feed roller, 4-in. glue rolls and ductor roller control for even application of adhesive. All parts in contact with adhesive are stainless steel. Machine is equipped with Oilite bearings and ¼-hp motor. Made by **Potdevin Machine Co.**, 1285-A 38th St., Brooklyn 18, N. Y.

For more details circle **NED-7805** on enclosed inquiry slip

RUBBISH INCINERATOR has steel casing and framing



Redesigned standard Rubbish Destructor features Multi-Rib steel casing for weight reduction, yet retains cleanliness, compactness and durability advantages of heavier steel-case construction. Air-cooled Multi-Rib stack replaces formerly used brick stacks which were subject to excessive deterioration from thermal and climatic shock. Incinerator is lined with Plicast castable refractory material and is insulated to protect the steelwork and paint. Designed to consume waste paper, cartons, floor sweepings, wood scrap and other industrial waste, burner is erected in sizes rated at 500, 1200, 2200 and 3500 lb per hour. Made by **Plibrico Jointless Firebrick Co.**, 1899 Kingsbury St., Chicago 14, Ill.

For more details circle **NED-7806** on enclosed inquiry slip

Wire Shapes and Forms TO YOUR SPECIFICATIONS

● Your wire forms are produced fast, accurately and at low cost with Sommer mass-production methods.

Speedy, automatic plating equipment handles either large or small assemblies. Popular new Zinc Iridite process adds a bright, durable, economical finish.

Sommer offers complete forming, stamping, cut-threading and butt-welding services. Let us work with you in designing and producing any wire shapes or forms needed for your defense contracts. Send sample, blueprint or drawing—see how Sommer can save you time and money.

SOMMER METALCRAFT CORPORATION
(Formerly JESCHKE Wire and Specialty Company)
200 POSTON DRIVE
CRAWFORDSVILLE, INDIANA

For more details circle **NED-7807** on enclosed inquiry slip

Michigan Machine Shop SAVES $700 ON BRONZE BAR STOCK in just one year!

DIRECT shipments of N-B-M "Tiger" Bronze reduce this customer's costs 35%

Thirty cents per pound . . . that's what a Michigan Machine Shop saved by ordering "Tiger" Bronze direct from National Bearing Division. And, *overnight shipment of their orders is assured by strategically located warehouses.*

These low prices are made possible by direct-to-you shipments . . . NOT by any sacrifice in quality, because the quality of N-B-M "Tiger" Bronze is high! It's anti-frictional to insure longer wear, and has physical properties that permit it to resist shocks, yet embed foreign particles.

13" lengths of "Tiger" Bronze are available in all popular sizes and bar types . . . cored, solid, and hexagon. Order a trial supply of "Tiger" Bronze today . . . you'll get better bearing service and save money!

Quotations and free catalog on request.

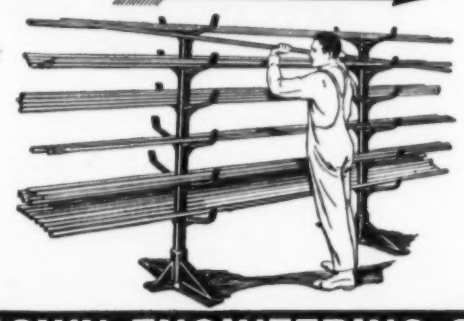
AMERICAN Brake Shoe COMPANY — NATIONAL BEARING DIVISION
4930 Manchester Avenue • St. Louis 10, Mo.
PLANTS IN: ST. LOUIS, MO. • MEADVILLE, PA. • NILES, OHIO • PORTSMOUTH, VA. • ST. PAUL, MINN. • CHICAGO, ILL.

For more details circle **NED-7808** on enclosed inquiry slip

SPEEDS UP STOCK-ROOM SERVICE

The BROWN TIME-SAVING RACK saves the time previously lost end-hauling each bar of stock its entire length from the old-style, closed-side Rack, the Brown Rack requiring but a few inches of side movement. Each length, width and thickness of stock is displayed in goldfish visibility for instant selection. Workmen waiting for stock are served without waste of time, and returned to their production machines to turn out a maximum of output. Any time you require additional storage space, all you need do is to add more units. If you want to relocate it at any time, you can do so for it is unattached to the building. It is a simple, durable article made of metal in five styles. It can't burn, warp, sag or twist: depreciation is practically nil. SEND FOR BULLETIN No. 26-D DESCRIBING—

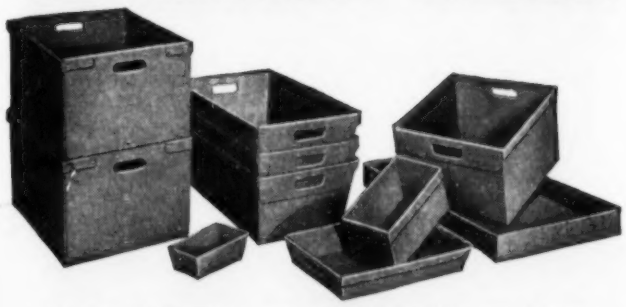
BROWN'S *QUICK-SERVE* RACKS



BROWN ENGINEERING CO.
129 N. THIRD ST. READING, PENNA.
RACKS • VISES • CLUTCHES • COUPLINGS

For more details circle **NED-7809** on enclosed inquiry slip

Chem-Board Tote Boxes HELP ARMAMENT PROGRAM



All kinds of materials, parts and sub-assemblies are flowing to production lines efficiently and economically in Convoy Chem-Board Tote Boxes to speed the armament program in plants from coast to coast.

Chem-Board is made of corrugated fibre-board, chemically impregnated by Convoy's exclusive process. It is flint hard and rock strong. It is not weakened by moisture. It is impervious to machine oils. Convoy Tote Boxes cost and weigh 50% to 60% less than steel.

The lightness, toughness and economy of Chem-Board Tote Boxes are unmatched. Tell us the style you use . . . we'll send a free production sample from the next run for you to test. As a guide for present and future availability, our current production capacity is served for the unprecedented demands from old customers and "DO" orders. Orders rated DO-MRO are acceptable. Write today.

Standard and Custom-made Nesting — Stacking — Vertical CHEM-BOARD TOTE BOXES

CONVOY, INC.
P. O. Station B, Box 216-N
CANTON 6, OHIO

For more details circle **NED-7810** on enclosed inquiry slip

HIGH-SPEED PIPE THREADING

"RAPIDUCTION" MACHINES

● Typical "RAPIDUCTION" speeds: 11 seconds for 1½" pipe; 25 seconds for 3" pipe; 66 seconds for 6" pipe; comparable speeds on all other sizes within range of these machines.

No. 6-A "RAPIDUCTION": Standard range 1½" to 6" pipe; bolt range 1" to 4".

No. 8 "RAPIDUCTION": Standard range 2½" to 8" pipe.

One die-head and one set of dies threads all sizes of same pitch, right hand, American National Standard, without change. Write for "RAPIDUCTION" catalog.

THE OSTER MANUFACTURING CO.
2066 EAST 61st STREET • CLEVELAND 3, OHIO, U.S.A.

For more details circle **NED-7811** on enclosed inquiry slip

CONTROL POWER BETTER

ROCKFORD CLUTCHES

For more details circle **NED-7812** on enclosed inquiry slip

THE CINCINNATI Wet Abrasive Cut-Off Machines

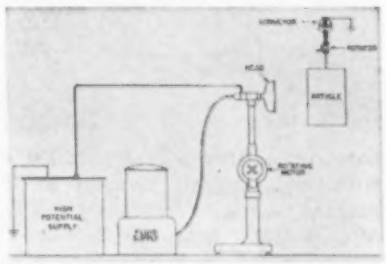
Cut Down ON CUT-OFF TIME!

Cut any metal, solids or tubing fast and accurately! Capacity up to 2-¼" in solids, 3-½" in tubing. Straight or angle cuts up to 45°. And look at these speeds: 2" bar stock in 15 seconds . . .2" tubing, 3/32" wall, in 10 seconds . . . 2" angle iron, ⅛" thick, 45° angle, in eight seconds. Special features include Cincinnati's exclusive water nozzle, insuring proper coolant flow for longer wheel life; and foot-operated vise, freeing operator's hands for faster production. Write today for Bulletin 51-KD.

TRADE The Cincinnati MARK
THE CINCINNATI ELECTRICAL TOOL CO.
Division of THE R. K. LeBLOND MACHINE TOOL CO.
CINCINNATI 8, OHIO, U. S. A.

For more details circle **NED-7813** on enclosed inquiry slip

ELECTROSTATIC SPRAY FINISHING process eliminates overspray and need for booth or compressed air



Employing electrostatic atomization principle for atomizing liquid coatings, No. 2 Electro-Spray process is designed for production finishing of all types of products. Article to be coated is carried by conveyor past a new type spray gun. Gun consists essentially of hollow cone-shaped head. Coating material is metered at constant rate to apex of head which rotates to cause material to flow to its outer surface.

Source of electrostatic high potential, having one terminal grounded and its other terminal connected to the head, creates a strong electrostatic field between the head and the article to be coated which is grounded by the conveyor. The force of this field transforms material into spray of fine charged particles that are attracted to the grounded article. This accounts for complete electrostatic deposition.

Major variables such as atomization air pressure, spray pattern, fluid delivery and overspray exhaust air currents are eliminated. System assures positive duplication of results. All paint leaving spray head is deposited, and only ventilation required is sufficient air movement to remove solvent vapors. Made by **Ransburg Electro-Coating Corp.**, 1204 Barth Ave., Indianapolis 7, Ind.

For more details circle **NED-7814** on enclosed inquiry slip

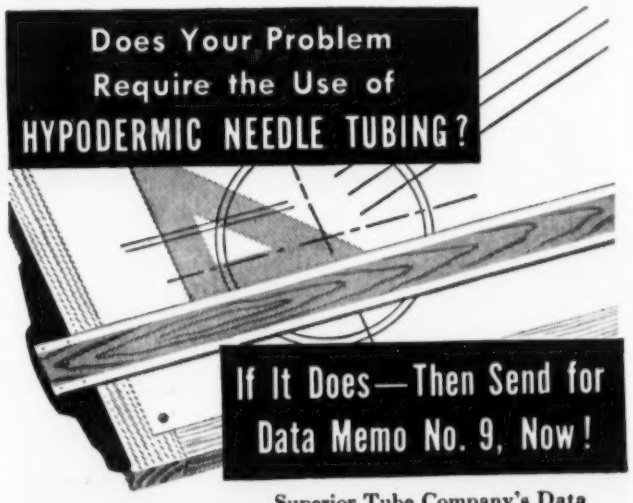
ELECTRIC ARC DRILL aids removal of broken drills, taps and will drill any odd-shaped hole

Speedy removal of broken taps, drills, reamers and studs is facilitated with latest model M-7 Tapmaster Electron drill which cuts with series of electric arcs. Electrode, which is hollow copper alloy tube half the diameter of broken tool, is fed downward as in drill press and cuts between core and threads of tap without damage to threads. Coolant pumped through hollow electrode washes away metal particles.

Holes from 0.040 to 1 in. and larger can be drilled in hardened dies accurate within 0.010-in., making tool applicable for enlarging keyway slots in cutters and dies or for repairing or alternating molds and dies. It will cut and counterbore cemented carbide, and since electrode does not revolve, but vibrates vertically, square or hexagon shaped holes can be drilled. Normal work clearance is 28 in. but 5-ft clearance from floor is possible with adjustable drill head reversed. Completely self-contained, drill has 2-kva rating. Made by **Elox Corp. of Michigan**, 742 N. Rochester Rd., Clawson, Mich.

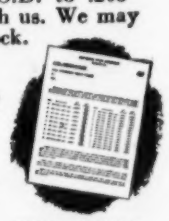
For more details circle **NED-7815** on enclosed inquiry slip

Does Your Problem Require the Use of HYPODERMIC NEEDLE TUBING?



If It Does—Then Send for Data Memo No. 9, Now!

Superior Tube Company's Data Memorandum No. 9 contains the basic information you'll need to order Hypodermic Needle Tubing. Today, because of conditions beyond our control, we may not be able to fill all of your needs for small diameter stainless steel tubing (.014" O.D. to .203" O.D.) but it will pay you to check with us. We may be able to supply your needs out of stock. Write today for Data Memo No. 9.



Superior
THE BIG NAME IN SMALL TUBING

All analyses—.010" to ⅝" O.D.
Certain analyses (.035" max. wall) up to 1⅜" O.D.

SUPERIOR TUBE COMPANY, 2018 GERMANTOWN AVE., NORRISTOWN, PA.

For more details circle **NED-7816** on enclosed inquiry slip

Standard models available in capacities from 200 lbs. x 6" wide to 10,000 lbs. x 40" wide.

IS YOUR SHOP CROWDED?

ROWE "Easy Load" AUTOMATIC

COIL CRADLES

Designed to use an absolute minimum of floor space in handling coils to your press operation.

★4 Power-driven rolls and instant width adjustment.

★Write today for literature and name of nearest distributor.

ROWE MACHINERY & MANUFACTURING CO., INC.
1506 N. INDUSTRIAL BLVD., DALLAS, TEXAS

For more details circle **NED-7817** on enclosed inquiry slip

Don't Walk... TALK!

The NEW Executone Intercom saves steps, increases output, cuts costs!

Compute the cost of time wasted by executives and employees running back and forth. *That's how much* the NEW Executone Intercom can save you! Your voice—with lightning speed—gets information, gives instructions. Every working hour becomes more productive for you and your employees. "Inside calls" no longer tie up telephone lines. Office and plant operate at a new peak of efficiency!

Years ahead of its time in operation and design!

Executone's exclusive "CHIME-MATIC"® Signalling announces calls by chime and signal light. Calls may be answered from across the room—yet privacy is assured. New switching circuits for every need make new savings possible. Voices are clearer, distinct, instantly recognizable. Inexpensive 2 station system easily expanded. It will pay you to get the whole story. Just mail the coupon.

Executone
COMMUNICATION & SOUND SYSTEMS

GET THE FACTS

EXECUTONE, INC., Dept. J-6.
415 Lexington Ave., New York 17, N. Y.

Without obligation, please let me have:
☐ The name of your local Distributor.
☐ Complete descriptive literature.

Name.....Title.....
Firm.....
Address.....City.....

For more details circle **NED-7818** on enclosed inquiry slip

For more details circle NED-7819 on enclosed inquiry slip

QUICK DELIVERY ON VALVES!

HANNIFIN *precision built* VALVES

for single or double-acting cylinders

Hannifin precision-built valves are *reliable*—and quickly *available!* For positive, accurate control of air-powered equipment, there is a Hannifin valve that will give long-time service in production operations.

QUICK DELIVERY IN ANY QUANTITY!

Hand operated. Simple design avoids leakage, waste of power—gives positive control. Sizes ⅛" to 1¼".
Also foot-operated types—leave operator's hands free. Sizes, ¼" to ¾".

Foot operated. Fast, effortless action. Pilot operated, air pressure does the work.
Also finger-tip actuated models.

Write for Bulletins 57, 240, 241

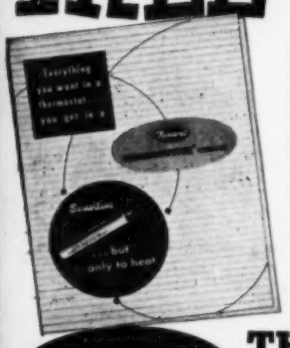
HANNIFIN

Hannifin Corporation • 1127 S. Kilbourn Ave. • Chicago 24, Illinois

For more details circle NED-7820 on enclosed inquiry slip

FREE COST-CUTTING FACTS!

Booklet describes unusual multi-purpose thermostat



If your processes involve control of heat, humidity, vapor level, radiant heat, pressure or other variables dependent on heat, it will pay you to investigate the fast, accurate, sensitive action of Fenwal low-cost THERMOSWITCH thermostats. Send for free booklet describing how Fenwal single-metal shell expands or contracts instantaneously with temperature changes, making or breaking totally enclosed electrical contacts.

Fenwal **THERMOSWITCH®**

The Precision, Multi-Purpose, Thermostat Control

SENSITIVE...*but only to heat*

FENWAL INC., 810 Pleasant St., Ashland, Mass.
111 South Burlington Ave., Los Angeles 4, Cal.
Temperature Control Engineers

MAIL TODAY

Please send me the Fenwal booklet "Everything you want in a thermostat."

Name.....Position.....
Company.....
Street.....
City.....Zone.....State.....

For more details circle NED-7821 on enclosed inquiry slip

MOVABLE PARTITIONS
feature strong nonmetallic surfaces

Featuring nonmetallic composition board of permanent flatness which is almost identical in appearance with company's steel panels, Korweld panel construction for movable office and building partitions withstands pushing pressure of 70 psi and pulling pressure of 500 lb. Partitions are 3 in. thick. Facing panels of nonmetallic board are 3/16-in. thick. They are plastic-welded to honeycomb of impregnated paper by Cycleweld process. Steel is used for posts, base, cornice, lay-in. wiring facilities and accessories. Panels are sealed from within and without, eliminating effects of moisture, and are covered with two coats of baked enamel. Made by **E. F. Hauserman Co.**, 6800 Grant Ave., Cleveland 5, O.

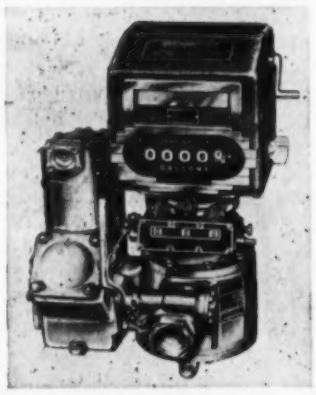
For more details circle NED-7822 on enclosed inquiry slip

HAND AIR HAMMER
strikes 6000 blows per minute

A light hand tool weighing just over 2 lb, Model G-200 air hammer is designed for medium to heavy duty work in general shop and maintenance operations. Hammer works at 120 psi and delivers up to 6000 blows per minute at maximum force. Lower speed or striking power is controlled with finger trigger action. Three-point ball-bearing chuck which locks tools in working position minimizing hazard of tool ejection, is safety feature. Driving piston is only moving part. Tool is available singly or with specialized tool kits. Offered with hammer are 66 different tools as well as blanks for making specialized tools. Made by **Salsbury Corp.**, Pneumatic Tool Div., 1163 E. Florence Ave., Los Angeles 1, Calif.

For more details circle NED-7823 on enclosed inquiry slip

LIQUID METER
for various petroleum products

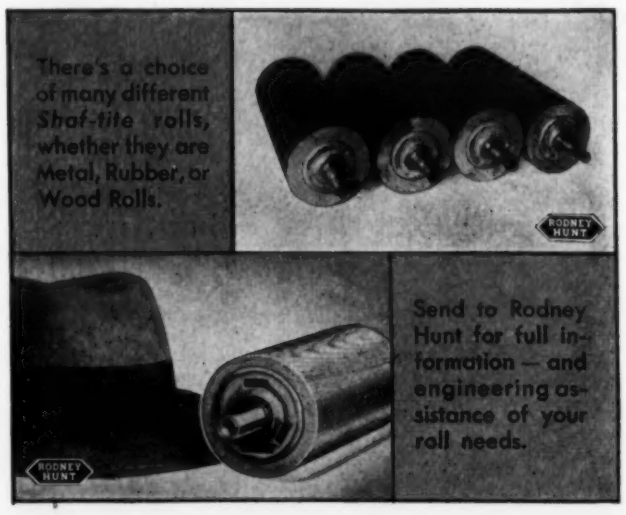


Designed for tank truck and small bulk plant installations, Granco model TDC meter will handle gasoline and stove oils with equal accuracy. Built-in air eliminator contains large, easily accessible strainer. The 60-gpm 1½-in. meter uses "floating rotor" spinning on ball bearings for least possible flow resistance. Accuracy is constant over wide flow range, and calibration is easy with adjustment dial graduated to give exact amount of plus or minus. Made by **Granberg Corp.**, 1301 67th St., Oakland 8, Calif.

For more details circle NED-7824 on enclosed inquiry slip

Make SHAF-TITE* Rolls part of your

Laboratory Units...
...and New Machine Design



RODNEY HUNT

Industrial Roll Division

RODNEY HUNT MACHINE CO.

573 MAPLE STREET, ORANGE, MASSACHUSETTS, U. S. A.

*Reg. U.S. Pat. Off.

For more details circle NED-7825 on enclosed inquiry slip

TWO REASONS WHY

MAUREY FHP V-DRIVES

BELONG ON YOUR PRODUCT

1. PROMPT SERVICE

No production delays waiting for Maurey V-pulleys, V-Belts, or V-Drives. Fast Maurey service helps speed your output.

2. TOP QUALITY

Maurey V-Drives *add* sales appeal to your product at no added cost. Attractive Pressed Steel V-Pulleys and machined, smartly finished Cast Iron V-Pulleys *look* like the top quality they are. MOR-GRIP V-Belts are built to exacting Maurey specifications for maximum flexibility, pull-power and long life.

Maurey Also Builds Special V-Drives For Special Requirements

Write for these FREE Maurey Bulletins:
Bulletin FHP-101 informs about MOR-GRIP V-BELTS
Bulletin OEM-2000 informs about HI-Q V-PULLEYS

PROMPT DELIVERY from complete stocks of all V-Drive Parts

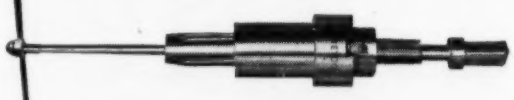
MAUREY MANUFACTURING CORP.

World's Largest Manufacturer of Pressed Steel and Cast Iron Single Groove V-Pulleys

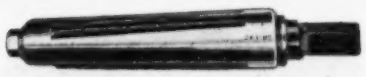
2910 S. WABASH AVENUE • CHICAGO 16, ILLINOIS

For more details circle NED-7826 on enclosed inquiry slip

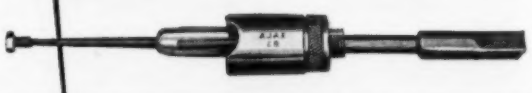
In many instances a big production schedule depends on a lot of little jobs *done right*. Tube expanding calls for special tools that do precision work quickly and easily. AIRETOOL makes the most efficient tube expanders known to industry for every type of tubular construction. You'll save time . . . you'll save money if you keep rolling with AIRETOOL expanders. For full information write The AIRETOOL Mfg. Co., 308 S. Center Street, Springfield, Ohio.



Airetool G-800 ball bearing type expander with 1" sheet adjustment for production rolling of heat exchanger and condenser tubes.



Airetool Collins Stub type expander. Excellent for fast rolling and for the re-rolling of thin sheets when necessary.



Airetool AJAX type expander with ¼" sheet adjustment for rolling condenser tubes.

AIRETOOL MANUFACTURING COMPANY
SPRINGFIELD, OHIO

BRANCH OFFICES:
New York, Philadelphia, Chicago, Tulsa, Baton Rouge, Houston

There's an AIRETOOL Tube Cleaner and Tube Expander for every type of tubular construction.

For more details circle NED-7827 on enclosed inquiry slip

with a

MILWAUKEE BRIQUETTING PRESS

Conserve critical metals, increase self-sufficiency and reduce scrap handling problems with the press that **pays for itself.** A MILWAUKEE briquetting press automatically converts low-grade bulk borings, turnings, chips and shavings into dense cylindrical blocks that can be charged into a furnace or foundry cupola as **high-grade scrap.** Six models with capacities ranging from 3/4 to 3 1/2 tons per hour are available.

Write today for **BULLETIN No. 117** *for complete details.*

107-81

SPO MILWAUKEE *Foundry Equipment Division*

6475 Grand Division Ave. • Cleveland 25, Ohio

For more details circle **NED-7828** on enclosed inquiry slip

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Aerovent FAN BELTED DUCT FAN

KEEPS MOTOR OUT OF AIR STREAM

For Foundries, Paint Spray Booths, Sanding, Acid Tank Rooms, etc., where fan motors must be protected.

Aerovent Belted Duct Fans with "Macheta" design handle maximum air with minimum use of power. Sizes 12" to 84"; 2, 4, or 6 blades. All fans furnished with ball bearing motors suitable for mounting in any position. Easily installed. For many applications.

Other Models: Direct Connected, Man Cooling, Extended Shaft, Duct Type, Pulley Drive.

Certified Ratings — Air Delivery is in accordance with Standard Test Code for Centrifugal and Axial Fans — PFMA

Write today for ENGINEERING BULLETIN

AEROVENT FAN CO., INC.
ASH AND BROWN STREET, PIQUA, OHIO

Sales Engineers in Principal Cities

For more details circle **NED-7829** on enclosed inquiry slip

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Dollar and Cents Angle

on Fafnir Sealed Ball Bearings

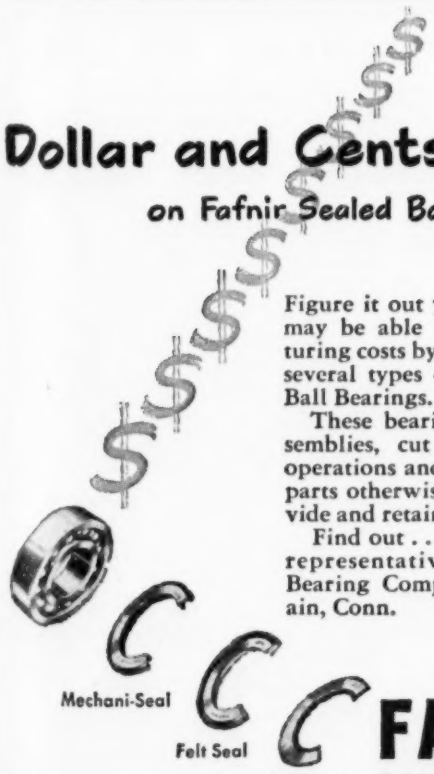

Figure it out yourself . . . you may be able to cut manufacturing costs by using one of the several types of Fafnir Sealed Ball Bearings.

These bearings simplify assemblies, cut out machinery operations and eliminate extra parts otherwise needed to provide and retain lubricants.

Find out . . . call in a Fafnir representative. The Fafnir Bearing Company, New Britain, Conn.

Mechani-Seal
Felt Seal
Plya-Seal

FAFNIR BALL BEARINGS

MOST COMPLETE LINE IN AMERICA

For more details circle **NED-7830** on enclosed inquiry slip

---

AUTOMATIC CLUTCH

usable on engine-driven equipment

When engine reaches proper speed, this automatic clutch engages by centrifugal action and starts equipment operating. This enables engine to operate at maximum efficiency and to start under no-load condition. Clutches are designed for use on lawnmowers, tractors and other engine-driven equipment in 1 to 2½-hp range. They can be supplied with single or multiple grooves for A or B section V-belts or with sprockets for chain drives. Standard model engages at 1750 rpm and releases automatically at approximately 1650 rpm. Models with other engagement speeds can be supplied to suit needs of application. Made by **Duramatic Clutch Corp.,** Dept. N, 8057 W. Warren Ave., Detroit 10, Mich.

For more details circle **NED-7831** on enclosed inquiry slip

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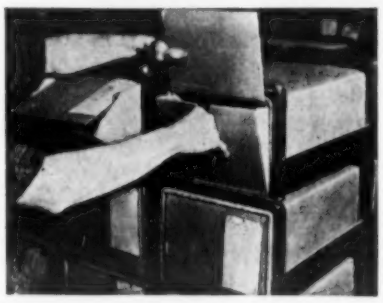
SHIPPING CONTAINER

stores and dispenses small parts



Constructed of corrugated board with sleeve running through entire length, Bin-Pak shipping, storing and dispensing container has scoop ends that pull out a limited distance on both ends. Covering flaps, when taped, seal ends of box which is suitable for small wooden, plastic or metal parts. Container fits any Berger, Lyons, General Fireproofing or other standard storage rack. Inventory can be taken from running record of contents kept on label on front of reusable container. Container is stored flat so that it occupies minimum space. It is set-up easily for use. Made by **Bird & Son,** Dept. CD-1, East Walpole, Mass.

For more details circle **NED-7832** on enclosed inquiry slip

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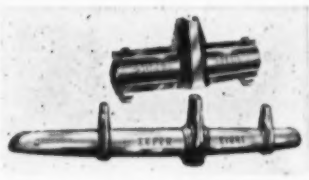
SPRAY DECORATING MASK

conforms to product contour



Electrocast to conform to every contour of product, regardless of size or shape, masks for decorating and identifying products requiring simple or elaborate color schemes are made of noncorrosive materials to last indefinitely with normal care. Shell-like mold fits snugly over object to be colored, cavities in mask permitting color to be applied on desired areas. Bridging allows spraying of colors completely around any portion of product. Baffling which permits spraying of many colors on object with single mask is possible. Masks are not stock item, each being engineered to specification. Made by **Jas. H. Matthews & Co.,** 3943 Forbes St., Pittsburgh 13, Pa.

For more details circle **NED-7833** on enclosed inquiry slip

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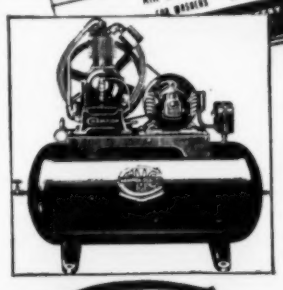
Get this FREE Answer Book on AIR COMPRESSORS

Contains detailed information on all 54 Champion Models, PLUS:

- How to Select the Proper Compressor
- Suggested Equipment Combinations
- Installation and Maintenance Tips
- Correct Wire Sizes for Motors
- Air Compressor Accessories
- Air Receiver Data
- Air Flow Table



The Champion Catalog is an invaluable guide to the factory using air power. It shows you the *21 extra features* built-in to every Champion Air Compressor. It shows you how you can save money and increase production by selecting compressors practically "tailor-made" to fit your needs. Write for your Free copy TODAY!

5643

CHAMPION
PNEUMATIC MACHINERY COMPANY
837 N. Pleasant Street, Princeton, Illinois

For more details circle **NED-7834** on enclosed inquiry slip

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MAGNET WIRE WITH THE WORKABILITY FOR FAST, LOW COST WINDING

Here's wire of proved workability when subjected to the punishment of modern high speed winding—whether random or layer. It helps insure freedom from broken wires, crossed turns, runbacks, spaced turns and frequent tension adjustments.

Essex Extra Test has the good slip necessary in coil winding. Slides evenly and smoothly in place, resulting in maximum turns in minimum space and in coils that will pack tight. When used for motor armatures, no matter how narrow the slots, Essex extra abrasion resistance reduces rejections.

When you specify Essex Extra-Test Magnet Wire for any winding job you can be sure.

ESSEX WIRE CORPORATION
FORT WAYNE 6, INDIANA

WAREHOUSES* AND SALES OFFICES: *Atlanta, Ga.; *Boston, Mass.; *Chicago, Ill.; Cleveland, Ohio; Dallas, Texas; Dayton, Ohio; Detroit, Mich.; Indianapolis, Ind.; *Kansas City, Mo.; *Los Angeles, Calif.; Milwaukee, Wis.; *Newark, N.J.; Pittsburgh, Pa.; *Portland, Ore.; Upper Darby, Philadelphia, Pa.; *Saint Louis, Mo.; *San Diego, Calif.; *San Francisco, Calif.

For more details circle **NED-7835** on enclosed inquiry slip

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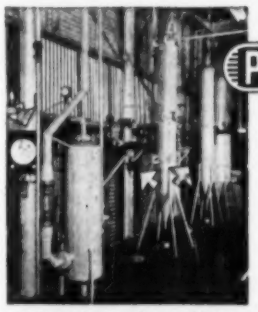
POWERS Recording Regulators Controlling Temperature of Orange Juice Concentrate

Quality Control at JUICE INDUSTRIES' Modern Plant increases soaring demand for their products



Photos above from Clinton Foods, Inc. Plant at Dunedin, Fla.

POWERS Recording TEMPERATURE Regulators

. . . controlling the SKINNER Mallorizer (above) and De-Oiler (at left) play their part in helping to maintain the uniformly fine flavor for which Juice Industries products are famous.

Next time you want more accurate control for any process, heating or air conditioning system, try POWERS. (a60)

THE POWERS REGULATOR CO.
3437 Oakton St., Skokie, Ill.

60 Years of Temperature and Humidity Control • Offices in Over 50 Cities

For more details circle **NED-7836** on enclosed inquiry slip

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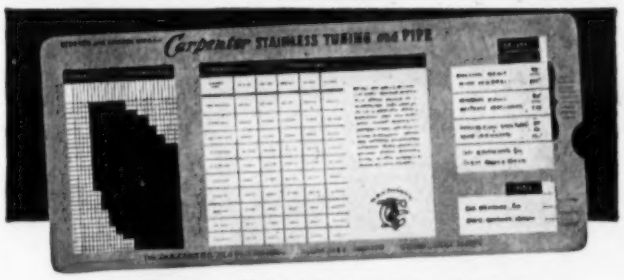


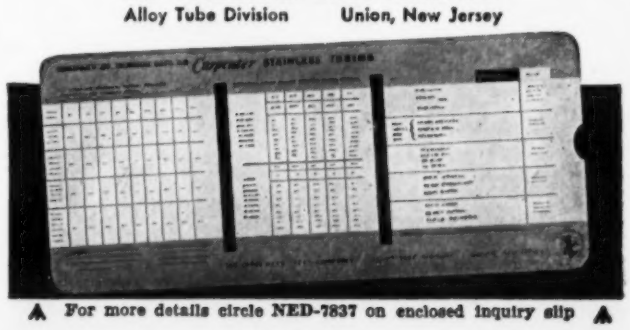
NEW SLIDE CHART

on *Carpenter* Stainless Tubing & Pipe gives you

- Recommended Bending Radii and Coil Diameters for tubing and pipe from 3/8" to 5".
- Physical Constants, standard sizes and pressure data.

A note on your company letterhead will start this useful Carpenter Stainless Tubing Slide Chart on its way to you.

THE CARPENTER STEEL COMPANY
Alloy Tube Division Union, New Jersey



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IMMEDIATE DELIVERY!

STANDARD FLAT TYPE C7000 SERIES SPEED NUTS®

Fastest Thing in Fastenings

Faced with a shortage of lock nuts? Do as thousands of manufacturers have done—switch to SPEED NUTS. They can be applied much faster, eliminate assembly steps, and provide maximum holding power at minimum cost per fastener. They spin on by hand, tighten down without being held with a wrench.

10 SIZES—For machine screws, C7000 SPEED NUTS are available in these sizes: –436, –632, –832, –1024, –¼-20. For tapping screws: –4A, –6A, –8A, –10A, –14A. Write for samples.

TINNERMAN PRODUCTS, INC.
Dept. 12-A, Box 6688, Cleveland 1, Ohio

For more details circle NED-7838 on enclosed inquiry slip

WESTON *Readable* ALL-METAL THERMOMETERS

AVAILABLE IN THESE 3 TYPES

STANDARD INDUSTRIAL THERMOMETERS

All-metal dial types with stainless steel stems, in straight and angle forms. Scale lengths 3"–6" and 9", with stems from 2½" to 72". Available as testing thermometers, and for general purpose and heavy duty service. Ranges from –100 to +1000°F. All-metal construction prevents breakage, assures dependable accuracy for longer periods.

CONTACT MAKING THERMOMETERS

Combines the features of the all-metal indicating thermometer with an alarm or control device. Has adjustable contact arm mounted in the glass and bezel. Supplied to make contact on increasing or decreasing temperatures. Has positive magnetic type contacts. Contact rating . . . 100 ma at 110 volts a-c; 50 ma at 110 volts d-c. Stem lengths 2½" to 24".

MAX-MIN THERMOMETERS

Equipped with a manually set red index which moves up or down scale with pointer, remaining at extreme temperature reached until reset. Thus one reading gives present temperature, and maximum or minimum reached since last reading. Available in scale lengths of 6" and 9"—stem lengths 2½" to 24".

Literature describing Weston all-metal, as well as electrical and glass thermometers, sent on request. WESTON Electrical Instrument Corporation, 615 Frelinghuysen Avenue, Newark 5, New Jersey . . . manufacturers of Weston and TAGliabue instruments.

WESTON *Instruments*

For more details circle NED-7839 on enclosed inquiry slip

WIRE SPOOL ADAPTER allows stitcher to use 25 lb coils

Accurate guiding and feeding of spool wire in steady flow to stitching head of automatic, manual, seam, bottom, metal, sword or straight arm type stitching machines is facilitated with this wire spool adapter. Device also converts any type stitching machine to use of 25-lb coils. Steady-flow feed of adapter prevents jam-ups, kinks or snarls within head. Brake is synchronized to release just enough wire for each stitch without slack or overrun. Once spool is mounted on machine, coil of wire is quickly inserted by removing flange of spool. Made by **Inland Wire Products Co.**, Dept. NED, 3947 S. Lowe Ave., Chicago 9, Ill.

For more details circle NED-7840 on enclosed inquiry slip

SOLDERING FLUX is noncorrosive and nonfuming

Recommended for soft soldering operations of all types, No. 30 flux is mildly acid when applied, but heat of soldering converts it to neutral noncorrosive nonhygroscopic residue. It does not fume, and residue is water soluble. Sample will be sent free upon request to **Superior Flux & Mfg. Co.**, Dept. G, 1302 Ontario St., Cleveland 13, O.

For more details circle NED-7841 on enclosed inquiry slip

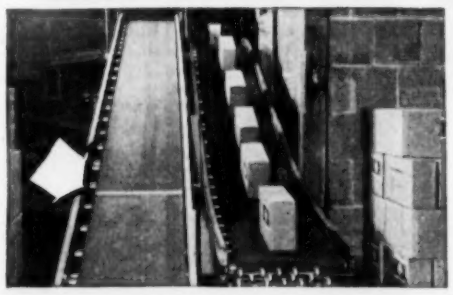
BELT FINISHING MACHINE attaches directly on motor shaft

Deburring, chamfering and finishing operations are performed readily with Xpeditor abrasive belt grinder. This versatile device consists of ½, ¾ or 1-hp 3450-rpm motor, 2½ x 60 to 72-in. abrasive belt, backup belt, 6-in. drive pulley, two 4⅝-in. ball bearing idler or driven pulleys, 2½ x 6-in. platen and frame. It is adjustable in any plane and to any angle to suit needs of work. Optional accessories such as tilting table, fence and stop bar adapt machine for production machining operations. Tools and jigs can also be used for duplicate production work. Free-hand grinding can be performed over front wheel which also offers line contact for flash or parting line removal. Free belt grinding can be done either above or below table or machine. Precision platen grinding is possible also. Made by **St. Paul Foundry & Mfg. Co.**, Heston & Anderson Div., 607 Kirkwood Ave., Fairfield, Iowa.

For more details circle NED-7842 on enclosed inquiry slip

ALLIGATOR®

CONVEYOR BELT LACING



*Every Tooth A Vise**

in Long Continuous Lengths for Conveyor Belts . . . . .

- ★ Excellent for Package Conveyors, Portable Loaders, Trenching and Ditching Machines, etc.
- ★ In canneries where corrosion or rust is a problem specify Alligator made of Monel.
- ★ For magnetic separators or anti-sparking specify Alligator made of Everdur.
- ★ Separable and smooth on both sides.
- ★ 12 sizes. For belts from 1/16" to 5/8" thick—and *any width.*

Order from Your Supply House. Ask for Bulletin A-60.

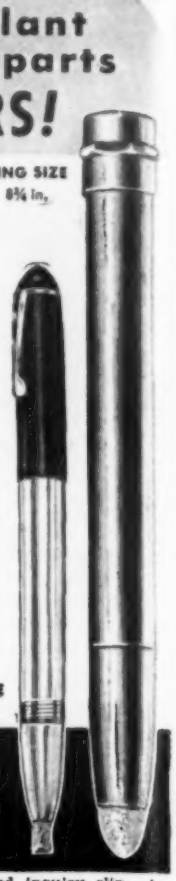
FLEXIBLE STEEL LACING CO. 4664 Lexington St., Chicago 44, Ill.

JUST A HAMMER TO APPLY IT

For more details circle NED-7843 on enclosed inquiry slip

Drawn with a FLO-MASTER

In OUR Plant we mark parts in COLORS!



Yes, in *colors* for easier assembling, stocking, identification, etc. And industry is finding the Flo-master Felt-Tip Marker ideal for *all* types of marking. Its felt tip glides over any surface—metal, plastic, wood, etc. with broad, bold lines or fine lines. Flo-master semi-opaque inks—waterproof, non-smudging, fast-drying—come in a wide range of colors.

For light colored surfaces, use Transparent Inks with "POCKET SIZE" Flo-master. For dark, hard-to-mark surfaces, use Semi-opaque Inks with the "KING SIZE" Flo-master.

Ask your supplier or write to Cushman & Denison Mfg. Co., 153 W. 23rd St., N.Y. 11

Flo-master
FELT-TIP MARKER

For more details circle NED-7844 on enclosed inquiry slip

SMALL ELECTRIC COUNTERS

Small space requirement and low cost make Mercury Electric Counters ideal for built-in applications. Low current draw (approx. 2 watts). Enclosed working parts, tamper-proof case. Speeds to 600 CPM and more. Operates in any position. Non-reset. Counts anything that will operate an electric switch or electric-eye.

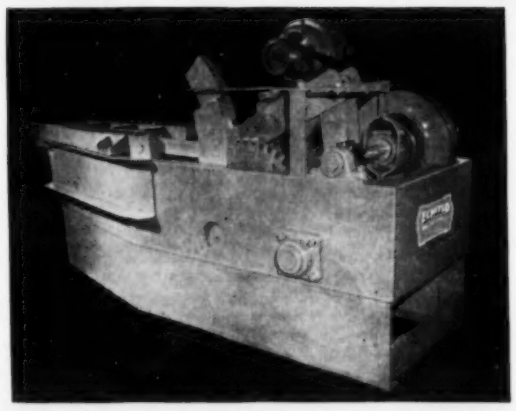
Counting Problems SOLVED

Send for Catalog or tell us what you want to accomplish.

Production Instrument Company
700-12 W. JACKSON BLVD., CHICAGO 6, ILL.
Representatives in Principal Cities

For more details circle NED-7845 on enclosed inquiry slip

SCRAP METAL BALER



● No pit required . . . No installation cost ● Costs only a fraction of hydraulic press cost ● Makes an electric furnace size bale—14" cube ● Baler delivers up to 140 tons pressure

Ease of installation is an important feature for large and small manufacturers and fabricators alike. Automatic pressure release prevents damage resulting from over-charging. Toggle mechanism is fabricated from heavy steel bar sections. All pivot points are phosphor-bronze bushed. All shafting is 4140 alloy steel. Finest punch press type clutch, flywheel and V-belt sheave assembly.

General Specifications: Capacity 12.8 cu. ft. . . . bale size—14" cube . . . bale weight—150-220 pounds . . . platen pressure—140 tons . . . stroke cycle—5 seconds . . . Power required—15 HP motor, 1200 RPM . . . floor space—12' x 6' . . . height—4 feet . . . weight (approx.)—12,000 lbs.

Write For Full Particulars Today

EAST CHICAGO MACHINE TOOL CORP.
4801 Railroad Ave. • East Chicago, Ind.

For more details circle NED-7846 on enclosed inquiry slip

SAVE UP TO 85% ON TOOLS-MACHINERY AND PARTS!!

NEW! 200 PAGE CATALOG

STATIONARY or PORTABLE D.C. ARC WELDER

For light or heavy industrial work. Delivers 300 Amps., continuous — or 350 to 400 Amps., intermittent. Designed to weld continuously for hours... This unit is built around a rugged, heavy duty, aircraft type generator and comes complete with Pulley reactor, output controls, Hi-Lo switches & rheostat mounted on sturdy steel frame. Operates on 15 H.P. for maximum output. Gas or electric motor. 97.50

WAR SURPLUS SAVINGS

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Our latest and biggest CATALOG of NEW and SURPLUS BARGAINS. Thousands of items at UNHEARD OF LOW PRICES! SAVINGS UP TO 85% in Hand & Power Tools, Electrical Supplies, Industrial Machinery, Gas and Electric Motors, Winches, Hoists, Machine Tools, Gauges, Welding Equipment, Pneumatic & Air Tools, Raw Stocks, Aluminum, Brass, Copper, & Steel in Sheets, Bar, Rods, Tube & Extrusions, Nuts, Bolts, Rivets, Screws, Wire, Cable and a Huge Stock of HYDRAULIC SUPPLIES including Cylinders, Valves, Pumps, Motors, Fittings, Tubing, etc. While these items last we will continue to sell them at typical low Palley Prices. Write for your copy of this Bargain Packed Catalog TODAY!

PALLEY SPECIALS on HYDRAULIC PUMPS & CYLINDERS

HYDRAULIC PUMP or MOTOR GEROTER TYPE

Logan Gerotor type. For operating hydraulic systems on trucks, tractors, etc. Delivers 8 GPM at 1200 RPM at 1000 PSI with 5 HP. Can also be used as Hydraulic fluid motor. 3/8" stand pipe ports. 1/2" splined shaft for pulley or direct attachment. 5 1/2" dia., 7" long. Used but condition guaranteed. 19.50

Special! HYDRAULIC CYLINDER

Gives 20,000 lb. thrust (push or pull) using 1500 PSI line pressure as obtained from our hydraulic pumps. Will produce up to 40,000 lb. thrust with 3000 PSI. Can also be used on low pressure air systems. 4" bore; 18" stroke; 30 1/2" length. Ideal for road-farm — shop machinery. 29.95

P-3 STRATO POWER PUMP

With built-in variable flow control valve in head. Positive displacement piston type. Displacement capacity: 2 gal. per min. at 1500 RPM at 1250 PSI. Pressure limit 1250 PSI continuous. 1400 PSI for 15 sec. Operates at 3750 RPM, intermittent max. 4500 RPM. Rotates either direction without adjustment... 19.50

No. 3 HYDRAULIC CYLINDER

Double action. Bore is 1" — Shaft 1/2". Has stroke of 2 1/2" to 4". Stroke can be adjusted with internal sleeve stops. Overall length is 8 1/2". Will take 1500 lbs. continuous duty. 3000 lbs. intermittent. Will lift or push up to 1100 lbs. 5.75

P-4 VICKERS ANGLE PUMP

Positive displacement type, angle piston. Displaces .507 cu. in. per revolution. Has capacity of 6 gal. per min. at 3000 RPM at 1500 PSI., continuous, 1875 for 15 sec. Operating speed of 3750 RPM, intermittent maximum, 4500 RPM. Rotates to the right only 19.49

4 WAY VALVE

Poppet type. Pressure balanced. Off at neutral position. Piston type with built-in relief valves for limit of cylinder strokes. 5/8" AN tube size (7/8"-14 thread) inlet & outlet. Parts to cylinder are 1/2" AN tube size (3/4"-16 thread) 9.75

PALLEY SUPPLY CO.

Dept. NED-10 6321 SAN FERNANDO RD. GLENDALE 1, CALIF.

Order from this ad. All sales final. All prices F.O.B., Glendale. Pay by M.O. or check. P.O.'s accepted from D.&B. firms. 1/2 deposit with C.O.D.'s.

For more details circle NED-7847 on enclosed inquiry slip

Moving or Storing is Rapid, Convenient and Inexpensive with

IRONBOUND SEMI-LIVE SKID PLATFORMS

Ruggedly built with capacities up to 2500 lbs. These units are quickly made mobile with the use of low cost lift jacks . . . One of the methods that Ironbound engineers use to increase production and conserve space at low cost.

SEMI-LIVE SKID WITH BOX TOP

. . . permanently attached or removable. Also available with many other superstructures to "Short-Haul" your products thru production or into storage. Useful in hundreds of spots in every plant.

THE IRONBOUND "SAFETY-SKID" WITH ROUND CORNERS

Ironbound construction assures long hard use with complete safety to product and operator. Still the time proven method for handling of materials efficiently and economically.

IRONBOUND BOX & LUMBER COMPANY

Materials Handling Division

55 HOFFMAN PLACE • HILLSIDE, N. J.

MANUFACTURERS OF QUALITY BUILT SKIDS, SEMI-LIVE SKIDS, FLOOR TRUCKS, ROLL TRUCKS, DOLLIES AND PRY BARS

For more details circle NED-7848 on enclosed inquiry slip

SHENANGO Centrifugal CASTINGS ... KEY TO SAVINGS

Teamed up for longer life under pressure

SHENANGO CENTRIFUGAL CASTINGS OF MEEHANITE METAL

These ram pistons, centrifugally cast of Meehanite Metal for 300-ton hydraulic press, must withstand 4,000 p.s.i. Completely machined and assembled by Shenango.

FIRST, Shenango's centrifugal process means a uniform, high-strength, pressure-dense casting, free from sand inclusions, blow holes and other defects. Next, in Meehanite Metal you have finer graphite flakes, always more evenly dispersed, thus avoiding stress concentrations and permitting a finer finish.

So here's a combination you just can't beat for wear-life... for resistance to abrasion, pressure or shock . . . for long-range *economy*!

If *your* plans call for essentially symmetrical parts, large or small, rough, semi- or finish-machined, check with Shenango. Get *all* the facts! Informative bulletins are yours for the asking.

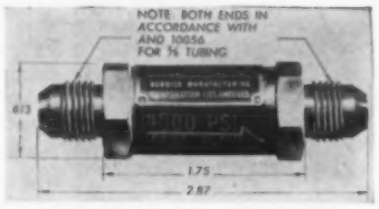
SHENANGO-PENN MOLD COMPANY
Dover, Ohio
Executive Offices: Pittsburgh, Pa.

SHENANGO

ALL RED BRONZES • MANGANESE BRONZES • ALUMINUM BRONZES
MONEL METAL • NI-RESIST • MEEHANITE METAL

For more details circle NED-7849 on enclosed inquiry slip

PNEUMATIC CHECK VALVE efficient at up to 4000 psi



Designed for efficient operation at air pressures up to 4000 psi and hydraulic pressures up to 5000 psi, pneumatic check valve has maximum free flow of 7.0 pounds per minute. Maximum pressure drop through valve is 100 psig at 7.0 pounds per minute air flow with air inlet pressure of 150 psig maximum. Leakage in reverse flow direction will not exceed 200 cu in. of free air per minute at 4000 psi. Proof pressure of check valve is 9200 psi. Outer cylinder is standard AN-6249-6 envelope, and both ends of unit are in accordance with AND-10056 for 3/8-in. tubing. Valve weighs 3.4 oz, and is made of stainless steel by **Bobrick Mfg. Corp.,** 1835 Blake Ave., Los Angeles 39, Calif.

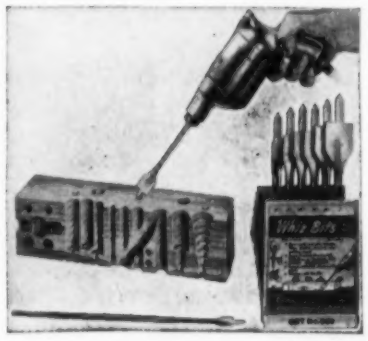
For more details circle NED-7850 on enclosed inquiry slip

SELF-LOCKING PLIER grips and holds work securely

Locking itself automatically, this drop forged and heat treated plier grips on any size item within jaw opening range. Finger-operated release trigger provides one hand plier, wrench or clamp action. Pressure remains until released. Made in two size ranges, plier has milled teeth, is nickel plated and is 7 1/2 in. long. Lower jaw curve conforms to all sizes and shapes. Curved end handle provides grip and gives better holding power. Made by **Sarvie Tool Co.,** Dept. NE, Alexandria, Minn.

For more details circle NED-7851 on enclosed inquiry slip

HIGH SPEED WOOD BITS for use with power tools



Performing efficiently in electric or pneumatic drills and drill presses at speeds of 450 to 3500 rpm these forged "moly" steel Whiz bits bore through hard or soft woods, plywood, fiberboard, plastics and mica. Pilot point guides bit on any course at angles from 45 to 90 degrees without preliminary starting. Maximum drilling depth is 4 1/4 in., and chips are unloaded continuously in seasoned lumber. Sized in increments of 1/8 in., bits are available in two sets: No. 600 containing six bits ranging from 3/8 to 1 in.; and No. 800 having eight bits in sizes of 3/8 to 1 1/8 in. plus one countersink. For drilling extra deep holes extended bits are available in eight head sizes from 1/2 to 1 1/8 in. and in lengths from 6 to 60 in. Made by **Billings & Spencer Co.,** 1 Laurel St., Hartford 10, Conn.

For more details circle NED-7852 on enclosed inquiry slip

Viking

• THE ORIGINAL COMPOUND SHEAR

APPLIES THE STRENGTH OF 20 MEN AT THE BLADE

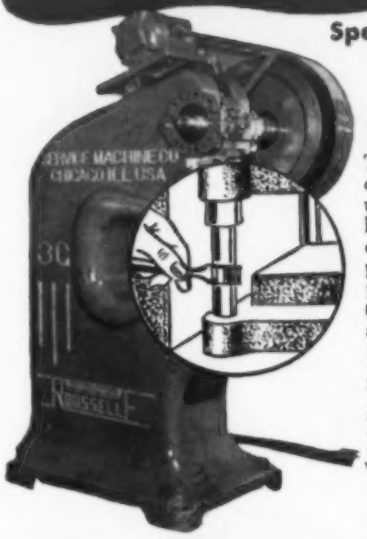
Cuts without kinking as easily as a tailor's shears thru cloth.
• Cuts Band Iron
• 1/4" Brass (any width)
• Copper, Sheet Iron Tin, Band Saws (any thickness or width)
• 12 Gauge Bessemer Steel

OVERALL LENGTH 34" • WEIGHT 22 LBS.
IMMEDIATE DELIVERY $29.00

VIKING SHEAR COMPANY
1065 W. 20th ST. • ERIE, PA.

For more details circle NED-7853 on enclosed inquiry slip

Insist on COMPLETE PROTECTION for Pins and Bushings!



Specify CMD Anti-Scoring LUBRICANTS

These Concentrated lubricants have no equal for use on guide posts and bushings of die sets because they give *Complete* protection for a long period of time. Check their many outstanding advantages.

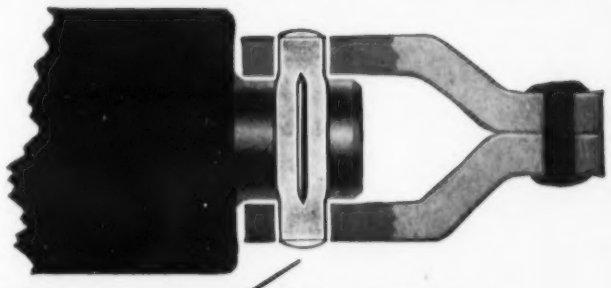
1. They outlast ordinary lubricants three to one.
2. They prevent any metal to metal contact.
3. They increase die life.
4. No scoring or seizure.
5. Will not drip off.
6. Will not corrode.

Write for FREE sample kit of one tube each of CMD Center Point Lube and CMD Center Point Oil. Address Department 10-NED.

Chicago Manufacturing & Distributing Co.
1928 West 46th Street Chicago 9, Illinois

For more details circle NED-7854 on enclosed inquiry slip

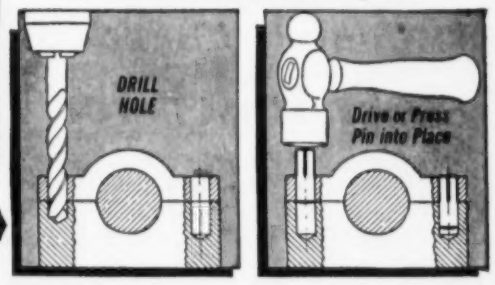
FASTER...EASIER Assembly with DRIV-LOK PINS



TYPE "E" PIN

★ Simple Installation
★ Low Cost
★ Wide Selection of Materials
★ Versatile...Types for Most Applications
★ Vibration and Shock-proof

2 EASY STEPS

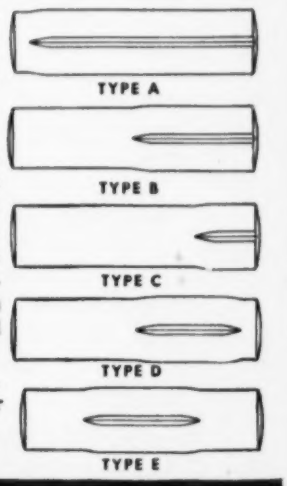


DRIV-LOK Pins speed assembly because they require only a drilled hole for installation—no taper or size reaming necessary. Drill the hole—drive or press in the pin . . . the job is complete.

Type E DRIV-LOK Pins (illustration at top) find many applications as pivot pins, T-Handles in tools and valves, cotter pins, cross pins, etc.

DRIV-LOK Pins are available in many types—in carbon steel, stainless, alloy and brass; diameters from 3/64" to 1/2", can be heat treated or plated to your specifications.

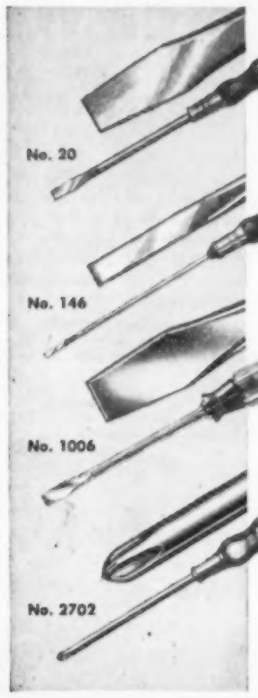
Write for catalog and samples, giving nature of your fastener problem.



DRIV-LOK PIN COMPANY
717 Chauncey St. • Sycamore, Ill.

For more details circle NED-7855 on enclosed inquiry slip

Give him a better driver to do a better job



Workers are more efficient when they're using the best tool for the job. And in the complete Stanley line you'll find an outstanding driver for every industrial need. Each Stanley driver has carefully tempered blade for maximum toughness . . . large, comfortable handle . . . accurately crossground tip. See your distributor. Insist on screw drivers and other Stanley tools for industrial use. Stanley Tools, New Britain, Connecticut.

No. 20 Famous "Hurwood" Blade, shank and head one piece alloy steel. Standard blade and tip. Blade lengths—2½-12".

No. 146 Thin blade and parallel-sided tips for work on instruments, light machinery, radios, etc. Blade lengths—1½-8".

No. 1006 Practically break- and shock-proof handle. Four blade lengths—4, 6, 8 and 12".

No. 2702 For Phillips Screws and Bolts. 4 point sizes for all Phillips Screws.

THE TOOL BOX OF THE WORLD

STANLEY

Reg. U.S. Pat. Off.

HARDWARE • TOOLS • ELECTRIC TOOLS • STEEL STRAPPING • STEEL

For more details circle NED-7856 on enclosed inquiry slip

Monarch CURED-ON Tires

Soft Touch for Floors

Monarch Tires will save you plenty of money on floor maintenance. Monarch-equipped hand trucks and carts pussy-foot easily over your floors, never groove or chip floor surfaces. Monarch Tires are easy on manpower, too—take bumps smoothly, soak up shock, make casters swivel easily. Be sure the vehicles you buy are equipped with Monarch Tires. Available in oil-resistant synthetics.

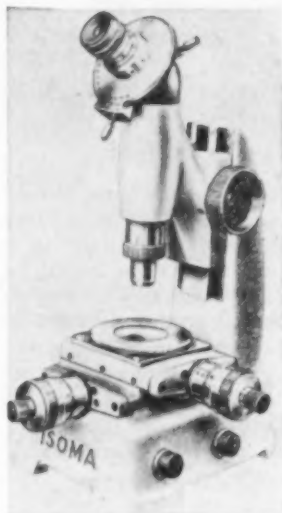
The leading manufacturers of industrial vehicles, both hand and powered, use Monarch Tires as original equipment. Replacements available through the manufacturer of your equipment.

THE MONARCH RUBBER COMPANY
200 LINCOLN PARK • HARTVILLE, OHIO

SPECIALISTS IN INDUSTRIAL SOLID TIRES AND MOLDED MECHANICAL RUBBER GOODS

For more details circle NED-7857 on enclosed inquiry slip

TOOLMAKER'S MICROSCOPE measures small machine parts with four interchangeable objectives



Especially designed for measuring extremely small screw machine, watch and instrument parts, Isoma toolmaker's microscope has interchangeable objectives for 20, 30, 50 or 100 times magnification. Other features include a 360-degree angle measuring device, fully graduated and numbered every 10'; adjustable illumination for top and underneath lighting of work piece; plus many support and holding accessories. Micrometer spindles are calibrated in 0.005 and 0.00005-in.

Two models of identical construction except for size of object table and spindle travel are available. On model M-101 object table is 3¼ in. square with crosswise and lengthwise travel of micrometer spindles of 11/16 in. Table of model M-102 is 3-7/16 x 3⅜ in. and spindles travel is 1¼ in. lengthwise, 1-3/16 in. crosswise. Standard equipment includes built in transformer for 110 or 220-v underneath light, angle measuring device, specimen support with spring clamp and 30-time objective. Available from **Cosa Corp.**, 616-624 Chrysler Bldg., New York 17, N. Y.

For more details circle NED-7858 on enclosed inquiry slip

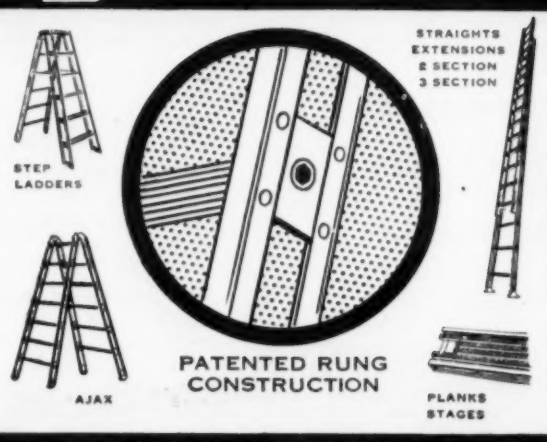
INDUSTRIAL TRACTOR pulls various types of trailers and has automatic coupling device

Operation in narrow aisles and accurate spotting of loaded trailers are possible with Grip-Tow motorized industrial tractor that automatically engages various types of in-

dustrial trailers. When tractor is driven to end of trailer, pushbutton-actuated hook on tractor engages lower side of trailer frame. Hook then pulls trailer into contact with tractor and pair of secondary hooks reach out and grab top part of trailer frame, firmly engaging tractor and trailer. Trailing wheels of tractor lift off floor so that weight of rear end of tractor is supported on trailer and both form integral frame. Complete coupling operation requires but a few seconds. Tractor will operate with almost any caster type trailer which has some edge projection which gripping mechanism can engage. Made by **Yale & Towne Mfg. Co.**, Philadelphia Div., Dept. M-1, Roosevelt Blvd. & Haldeman Ave., Philadelphia 15, Pa.

For more details circle NED-7859 on enclosed inquiry slip

LOUISVILLE Safe-Weight ALUMINUM LADDERS



Louisville Safe-Weight products are designed for maximum safety on heavy duty jobs. Corrugated rungs are reinforced and then securely riveted to special extruded aluminum side rails. This construction insures against rung loosening or twisting. There's no deterioration, no splinters, cracked rails, dry rot. Send for catalog.

LOUISVILLE METAL PRODUCTS CO.
1101 W. OAK ST., DEPT. Z, LOUISVILLE 10, KY.

For more details circle NED-7860 on enclosed inquiry slip

EYE LEVEL CHECK ON BOILER WATER LEVELS

Positive, constant check on boiler water levels is now possible at eye level—right on the instrument panel or other convenient location.

Yarway's Remote Liquid Level Indicator is always accurate because it's operated by the boiler water itself. No stuffing boxes. Indicating mechanism is never under pressure.

Ideal for indicating boiler water level, feed heater water level, superheater pressure differentials and tank levels. For complete description and operating details, write for Bulletin WG-1822.

YARNALL-WARING COMPANY
131 Mermaid Ave., Philadelphia 18, Pa.

YARWAY
REMOTE LIQUID LEVEL INDICATOR

For more details circle NED-7861 on enclosed inquiry slip

Custom-Built PUMPS for Special Jobs

Your problem of getting a special pump may be solved easily if you put it up to Brown & Sharpe. Wide experience in designing pumps for many special purposes in many different fields of industry enables Brown & Sharpe to solve special pump problems quickly, often at worth-while savings. Send specifications for recommendations. Brown & Sharpe Mfg. Co., Providence 1, R. I.

We urge buying through the Distributor

GEARED VANE
CENTRIFUGAL
MOTOR DRIVEN

Flange Mounted Rotary Geared Pump readily adapted to many machines.

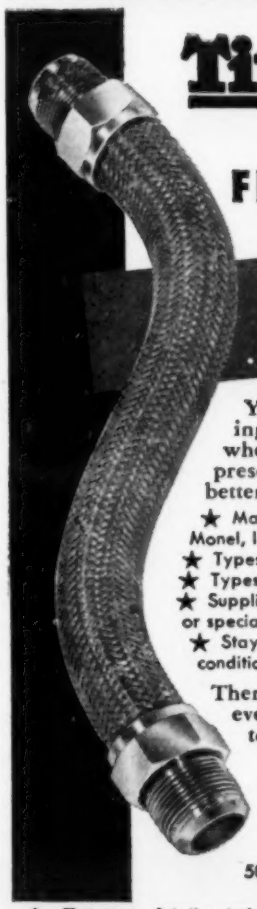
Flange Mounted Rotary Geared Pump with Multiple Pipe Connections.

Duplex Unif can be arranged to pump dissimilar liquids.

BROWN & SHARPE

For more details circle NED-7862 on enclosed inquiry slip

Titeflex ALL-METAL FLEXIBLE TUBING



...FOR VIBRATION
...FOR FLEXING
...FOR MISALIGNMENT

You can't beat Titeflex for conveying liquids, gases or semi-solids when there is any kind of motion present. Here are the facts about this better-built flexible tubing:

★ Made in five metals—brass, bronze, stainless, Monel, Inconel.
★ Types and sizes to withstand heat to 1550°F.
★ Types and sizes for pressures up to 6800 psi.
★ Supplied with any type of fittings—standard or special.
★ Stays flexible and stays tight under severe conditions.

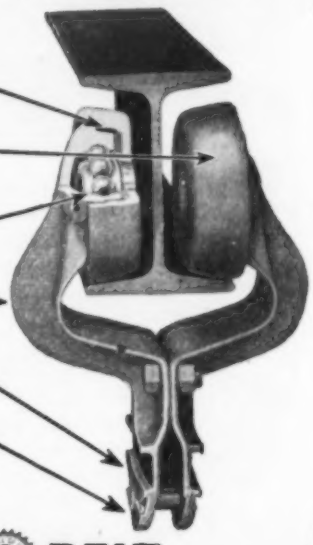
There's a style of Titeflex for almost every need—and Titeflex is *all-metal*, to last longer in any kind of service.

Write for complete catalog.

Titeflex, Inc.
507 Frelinghuysen Avenue, Newark 5, N. J.

For more details circle NED-7863 on enclosed inquiry slip

Important points to look for when you buy trolleys You get them all when you buy Link-Belt



Effective sealing of wheel and bracket keeps out dust and dirt.

Wheels are drop-forged, internally machined to extremely close tolerances.

Raceways are induction hardened. High load capacity is based on entire assembly — not just on bearing.

Rugged, one-piece bracket and clevis are drop-forged and heat-treated—fewer parts to maintain.

Trolley can replace other makes without disturbing chain's operating position.

Clevis pins are locked in bracket, cannot rotate. Bracket wear is minimized.

Write for Folder 2241-B.

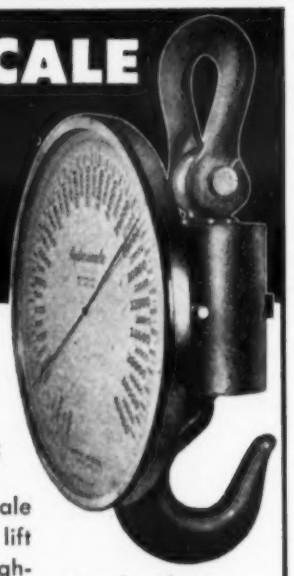
LINK-BELT

LINK-BELT COMPANY: Chicago 8, Indianapolis 6, Philadelphia 40, Atlanta, Houston 1, Minneapolis 5, San Francisco 24, Los Angeles 33, Seattle 4, Toronto 8. 12,384

For more details circle **NED-7864** on enclosed inquiry slip

HYDROSCALE

Proved on Hundreds of Jobs



SAVES DOLLARS IN TAKING INVENTORY AND IN CHECKING INCOMING MATERIALS

- This hydraulic crane scale weighs the load as you lift it to move it—Makes weighing so simple that it's done where it might otherwise be neglected. Cuts manpower and equipment tie-ups. Eliminates the need for weighing stations.

Low headroom

3 Dial sizes: 12, 24, 30"

Models 500 to 100,000 lbs. capacity

Write for our catalog.

HYDROWAY SCALES, INC.
20624 WEST 8 MILE ROAD · P. O. Box 4754 · DETROIT 19 MICH

For more details circle **NED-7865** on enclosed inquiry slip

More Power in Less Space

FOOTE BROS.

PARALLEL SHAFT HELICAL GEAR DRIVES

Precision processed gearing, improved materials and heat treatment assure top performance — permit selection of smaller size, lower weight units. Overlapping tooth action, close backlash tolerances, reinforced housing design, plus antifriction bearings throughout, mean smoother, quieter operation.

Write for Bulletin MPB

FOOTE BROS. GEAR AND MACHINE CORPORATION
Dept. NE, 4545 South Western Boulevard • Chicago 9, Illinois

FOOTE BROS.
Better Power Transmission Through Better Gears

For more details circle **NED-7866** on enclosed inquiry slip

LIGHTWEIGHT SPRAY GUN features adjustable spray pattern

Spray work ranging from touch-up of small spots to refinishing of large objects can be handled by type TGA spray gun which features fingertip adjustment control for wide selection of spray patterns. The 13¾-oz gun is aluminum alloy with box frame body. Sure-grip handle reduces hand fatigue while permitting spraying with smooth trigger action. Gun uses ball and cone principle of nozzle construction and requires 4 or 5 cfm of air at 40 lb pressure. All kinds of materials can be sprayed by gun which is designed for either suction or pressure feed. Made by **DeVilbiss Co.**, 301 Phillips Ave., Toledo 1, O.

For more details circle **NED-7867** on enclosed inquiry slip

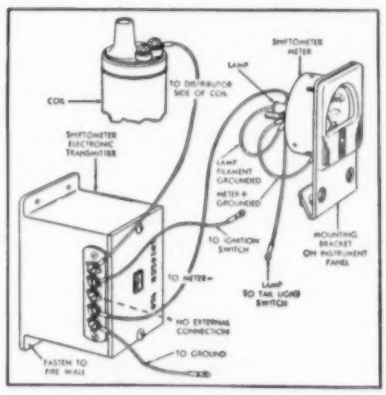
CHROME MOLY STEEL ELECTRODE for repair and maintenance work

Chrome and nickel content of EutecTrode 70 welding electrode plus its FrigidArc coating result in ease of application in all positions with smooth arc action. Designed for repair and maintenance work on chrome-molybdenum steel, it has high tensile strength and low amperage application that minimizes heat defects in weld area. Electrode is made in 1/16, 5/64, 3/32, 1/8, 5/32 and 3/16-in. diameters. Made by **Eutectic Welding Alloys Corp.**, Dept. P, 172nd St. & Northern Blvd., Flushing, N. Y.

For more details circle **NED-7868** on enclosed inquiry slip

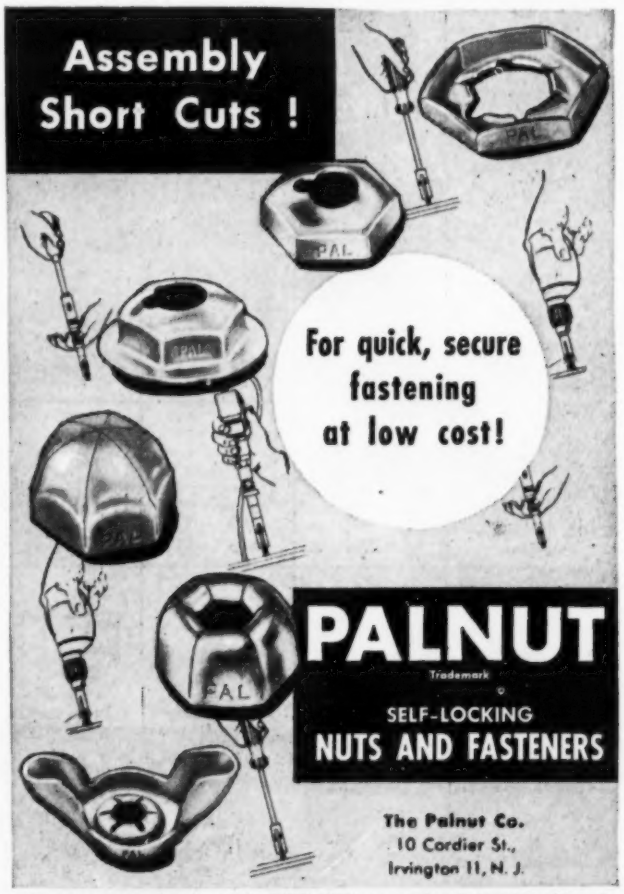
TRUCK GEAR SHIFT GUIDE helps select most efficient gear

Practical for vehicles equipped with two-speed axles or multiple gears, Shiftometer provides guide to correct gear shifting and detects faulty performance in ignition system. Device consists of electronic receiver - transmitter hooked to distributor side of coil. In operation, ignition signals are picked up and transmitted to receiver, then to instrument mounted on dash panel. Driver watches meter dial which is divided in four speed ranges shown in white, amber, green and red, and selects gear that keeps dial pointer in the green. For Diesels, meter is fitted with pick-up using standard automotive breakerpoints plus Diesel adapter in transmitter box. Voltage range is 6, 12 or 24 v. Device spots ignition failure by detecting bouncing breaker points, wrong dwell angle, weak condenser, worn distributor bearings and bad plugs. Made by **Paramount Fabricating Co.**, 1646 W. Lafayette St., Detroit, Mich.



For more details circle **NED-7869** on enclosed inquiry slip

Assembly Short Cuts !



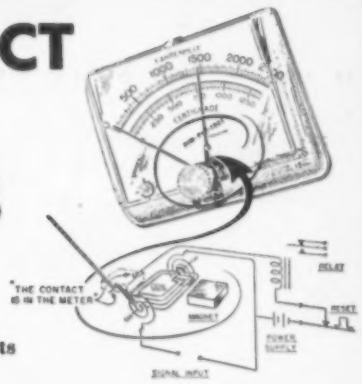
For quick, secure fastening at low cost!

PALNUT
Trademark
SELF-LOCKING
NUTS AND FASTENERS

The Palnut Co.
10 Cordier St.,
Irvington 11, N. J.

For more details circle **NED-7870** on enclosed inquiry slip

CONTACT METER RELAYS



sensitive to

.000,000,002 watts

Simplytrol Contact Meter-Relays make Automatic Control economical for many uses where it was impractical before.

Sensitive to changes of less than 1% of the scale range, these precision relays may be used in any circuit where an ordinary meter might be used. They have a full 90° of scale arc. The contact point is fully adjustable from the front and it may be set to any point on the scale.

Simplytrols exclusive Micro-Contacts assure instantaneous circuit closing with high contact pressure and a clean, positive break. Uses include Automatic Control of Temperature, Speed, etc., Over- & Under-Control of Voltage, Current, etc., Automatic Inspection.

Simplytrols are available in many ranges from 0-20 Microamperes and up, AC and DC, and in Pyrometer ranges to 3000°F. Prices run from $25.90 to $85.00. Send for Bulletin CMR-9 with suggested circuits and technical description.

Assembly Products, Inc.

Chagrin Falls 12, Ohio, Phone CH 7-7374

For more details circle **NED-7871** on enclosed inquiry slip

"at last—a valve that fills all our requirements"

Cameron

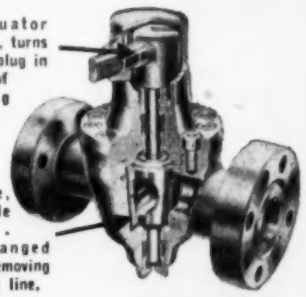
NON-LUBRICATED

LIFT-PLUG VALVE

These valves are credited with outstanding performance in such extremely severe services as: highly corrosive chemicals (HF and H_2SO_4) in refinery alkylation units; a process plant operating at 1600 degrees F. and at practically absolute vacuum; a producing oil well where it was required to operate daily at 6500 lbs. pressure. Obviously, with a good record on these services, the Cameron Non-Lubricated Lift-Plug Valve fills run-of-the-mill valve requirements in a walk.

The novel mechanical features of this valve include a separate and renewable seat which permits any desired trim for special services and facilitates repairs without removing the valve from the line. Being non-lubricated, it requires no periodic attention and saves maintenance expense. Also, this feature is particularly desirable in a wide range of services, from food processing plants to aviation gasoline refineries, where it is essential to keep valve lubricants out of the line product.

Send today for a copy of the Cameron Valve Catalog. It tells the complete story of this truly remarkable valve.



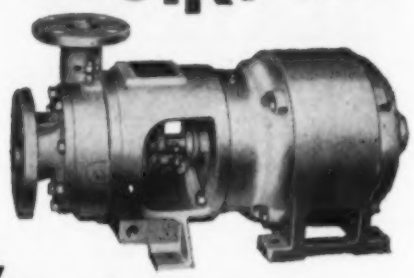
Cameron **IRON WORKS, INC.**
P. O. BOX 1212, HOUSTON, TEXAS

Export: 74 Trinity Place, New York, N. Y. Represented in the sterling area by: British Oilfield Equipment Co., Ltd., Duke's Court, St. James's, London S.W.1, Eng.

For more details circle **NED-7872** on enclosed inquiry slip

The right pump is the

MOTOR PUMP



for fast, dependable, solvent recovery

MOTORPUMPS are properly engineered and ruggedly built to meet dry cleaners' needs for highest pumping efficiency and long, trouble-free service. Motor and pump are a self-contained, compact unit, which assure steady flow, minimum vibration and less maintenance.

Sizes from ¼ to 40 h.p. circulating up to 1800 g.p.m. Write us for complete information.

Ingersoll-Rand
11 Broadway, New York 4, N. Y.

513-9

For more details circle NED-7873 on enclosed inquiry slip

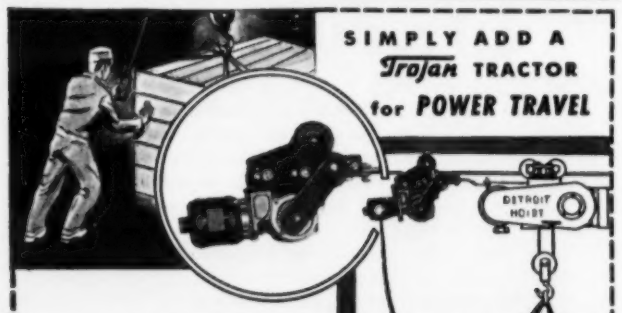
Both "PANORAMS" give BIG VALUE for Your EYE PROTECTION MONEY!

Model numbers and sizes differ (AO 600 for medium and larger faces—AO 800 for smaller faces) but you'll find the same superb wide angle vision, lightweight comfort and conformance to high safety and optical standards in both of these plastic goggles. Worn directly over the eyes or personal glasses, they protect against flying particles from any direction. For chipping, grinding, babbitting, cutting rivets or rails, riveting, spike driving, spot welding. Your nearest AO Safety Products Representative can supply you.

American Optical COMPANY
SAFETY PRODUCTS DIVISION

Southbridge, Massachusetts • Branches in Principal Cities

For more details circle NED-7874 on enclosed inquiry slip



SIMPLY ADD A *Trojan* TRACTOR for POWER TRAVEL

The Trojan Tractor will quickly convert existing slow, hand traveled hoists and small cranes to power travel and speed up material handling. It is a compact, low cost, power travel unit that can be readily attached to overhead material handling equipment by means of a simple draw bar.

Send in this advertisement for more information and a copy of Trojan Tractor Bulletin 810; just fill in company name and address.

DETROIT HOIST & MACHINE CO.
8268 MORROW ST. • DETROIT 11, MICH.

Company_____

Address_____

For more details circle NED-7875 on enclosed inquiry slip

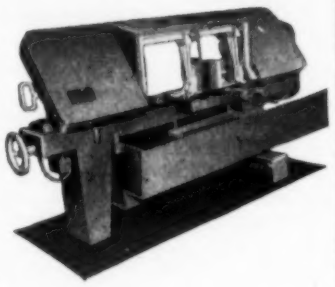
HIGH-SPEED HACK SAW BLADE has three sections welded together

Safety and straight cutting is assured by Powerflex high-speed power hack saw blade which is made with three separate pieces welded together. Back is tough steel for shock absorption and middle is medium-hard steel for more power and straight cutting. Cutting edge is hard and tough for long lasting sharpness. Blade resists tooth stripping under normal conditions. It is available with four, six or ten teeth per inch in 14, 18, 21 and 24-in. lengths. Distributed by **John H. Graham & Co.**, Dept. NED, 105 Duane St., New York 8, N. Y.

For more details circle NED-7876 on enclosed inquiry slip

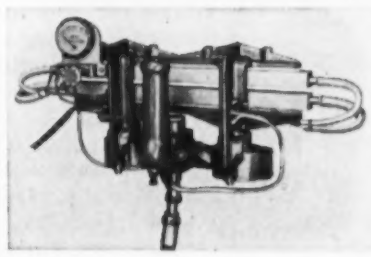
METAL-CUTTING BAND SAW cuts up to 12 x 20-in. flats

Available in standard or coolant equipped models, No. 1220 metal cutting band saw will handle 12-in. and larger diameter rounds. Four cutting speeds from 61 to 259 fpm and dash-pot controlled constant-pressure assure fast, production operation. Swivel leaf type vise adjusts for cutting angles up to 45 degrees, and cutting operation is visible at all times. Standard equipment includes 1-hp motor and stock stop bar. Made by **Kalamazoo Tank & Silo Co.**, 500-508 Harrison St., Kalamazoo, Mich.



For more details circle NED-7877 on enclosed inquiry slip

HEAT SEALING TOOL seals barrier wrapping materials



Heat-sealed wrapping of large objects such as engines and bulky electronic equipment is facilitated with Aero Seal-It portable air-operated heat sealer which has 13-in. jaws. Though especially designed for effecting strong permanent seal to heavy laminated barrier wrapping materials, this tool can be used also for heat sealing of cellophane, Pliofilm, polyethylene and Saran films.

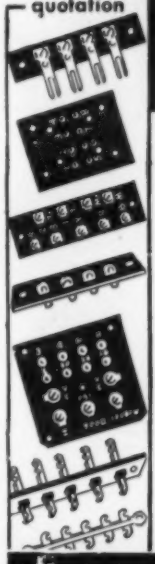
Safety counterbalance is available to relieve operator fatigue. Trigger controls action of jaws which close under air pressure and automatically open after predetermined time. Rubber facing on one jaw eliminates bunching of material at edges to be sealed. Temperature is controlled thermostatically and can be adjusted to suit type of material to be sealed. Stand is available to convert sealer into bench type unit. Made by **Globe Products-Heat Seal Corp.**, 3372 Robertson Blvd., Los Angeles, Calif.

For more details circle NED-7878 on enclosed inquiry slip

For more details circle NED-7879 on enclosed inquiry slip

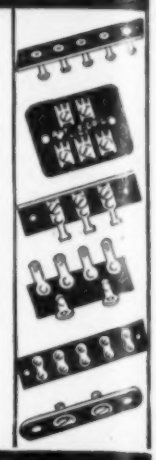
Send your specifications for prompt quotation

Hundreds of standard
JONES
TERMINAL PANELS
Complete Equipment
FOR
SPECIALS



Several pages of Jones Catalog No. 16 illustrate standard and special panels we are constantly producing. Latest special equipment enables us promptly to produce practically any panel required. Send print or description for prices, without obligation. Hundreds of standard terminal strips also listed. Send for Catalog, with engineering drawings and data.

JONES MEANS *Proven* QUALITY

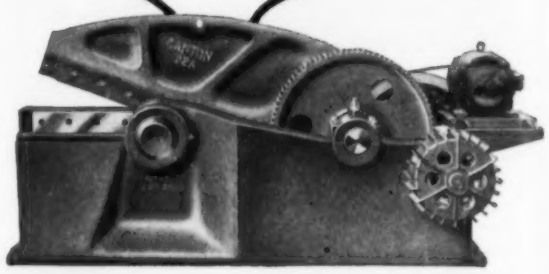


Jones

HOWARD B. JONES DIVISION
CINCH MANUFACTURING CORPORATION
CHICAGO 24, ILLINOIS
SUBSIDIARY OF UNITED-CARR FASTENER CORP.

For more details circle NED-7880 on enclosed inquiry slip

"CANTON" ALLIGATOR SHEARS
for industrial shearing as well as scrap preparation.



for production cutting . . .
CANTON Alligator Shears are manufactured in a wide range of sizes for commercial production shearing of bars, flats, rounds, angles, etc. Machines are available with or without stop motion clutch.

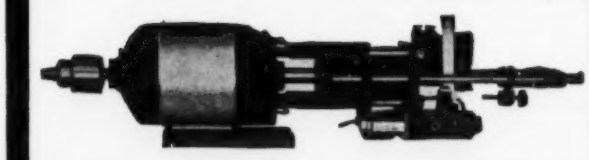
for scrap shearing . . .
CANTON Alligator Shears have the advantages of a self contained unit—No Foundation Required—Adjustable knife seat eliminates shimming of blades. Made in a complete range of sizes and models for every shearing need.

The HILL ACME *Company*
"CANTON" DIVISION 1701 West 65th St. CLEVELAND 2, OHIO

Bulletin N-51 Gives Complete Details.

For more details circle NED-7881 on enclosed inquiry slip

New BLACK SELF-CONTAINED DRILLING UNITS



NO SPLINES — Self-contained units, at low cost, for drilling, tapping, chamfering, reaming and similar operations.

NO GEARS — New principle employs traversing motor shaft for work spindle, applies even torque with practically no end play. Drill has air feed for rapid advance to work—hydraulic control to completion of work cycle with uniform feed. Tapping unit controlled so tap follows its own lead without chamfering first thread or stripping threads on return stroke. Easy adjustment—depth accuracy to within .001".

NO CAMS

NO CLUTCHES

NO REVOLVING WEIGHTS — Operate in any position. Wide range of speeds and sizes.

Write for complete information

THE BLACK DRILL COMPANY
1380 EAST 222nd STREET CLEVELAND 17, OHIO

For more details circle NED-7882 on enclosed inquiry slip

LOW COST *Electronic* AIR FILTRATION

The Electro-PL is a unique dry-type, electronic air filter. Designed to provide intermediate air cleaning efficiency with maximum economy, it is now widely used for industrial, commercial and military installations. These total more than 5,000,000 cfm. The Electro-PL is dual-purpose . . . may be operated as either a dry-type air filter or with the electronic feature as seasonal conditions vary. Available in standard units for straight or "V" bank arrangements to meet almost any air volume requirements. For complete details write for Engineering Bulletin No. 257.

American Air Filter
COMPANY, INC.
391 Central Avenue, Louisville 8, Ky.
In Canada: Darling Bros., Ltd., Montreal, P. Q.

For more details circle NED-7883 on enclosed inquiry slip

SPEEDY ROTOR CHIPPERS "PAID OFF" in 29 days

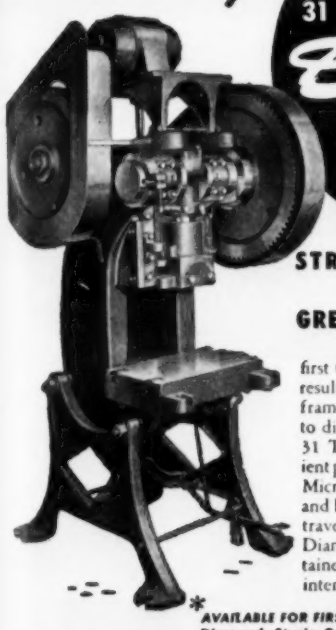
JOB: Cleaning off excess metal from base castings Were using 14¾-lb. hammers—slow and hard to control.
SOLUTION: Rotor Application Engineer recommended new Rotor Chippers. Weigh only 11½ lbs. Easy to maneuver. High speed. Lots of wallop
RESULTS: Cut rejects More output "paid off" new Rotor Chippers in 29 days.
Call us for a survey in your plant.
Ask for Catalogue No. 37 AIR O'TOOL

ROTOR CHIPPER FACTS
LIGHTER . . . 1½ to 3 lbs. lighter.
SHORTER . . . 1" to 2" shorter.
MATCH YOUR JOB . . . Each basic model can be adapted to three kinds of work

THE ROTOR TOOL CO.
CLEVELAND, OHIO

For more details circle NED-7884 on enclosed inquiry slip

Latest Design **POWERFUL 31 TON BACK-GEARED *Diamond* PUNCH PRESS**



*** STRAIN GAUGE ANALYZED FOR GREATEST FRAME STRENGTH**

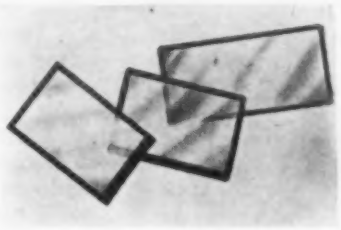
Strain-gauge analysis, applied for first time to Diamond punch presses, has resulted in more equal distribution of frame strength with maximum resistance to distortion. Cradle mounted, Diamond 31 Ton frame inclines to most convenient position. Other improvements include Micro-Finished surfaces on gibs, slides and bearings, assuring velvet-smooth ram travel with less friction and longer life. Diamond production tolerances are maintained so close that duplicate parts are interchangeable without hand fitting!

* *AVAILABLE FOR FIRST TIME . . .* A complete technical report on Diamond Strain-Gauge Analysis of Punch Presses and Operations. Every user of punch presses should obtain a copy! Sent free on request with circular featuring 9 - 14 - 30 and 31 Ton Diamond Punch Presses. Write today!

DIAMOND
DIAMOND MACHINE TOOL CO.
DEPT D • 3429 E. OLYMPIC BLVD., LOS ANGELES 23, CALIF.
MANUFACTURERS OF THE DIAMOND LINE OF PRECISION MACHINE TOOLS AND ACCESSORIES

For more details circle NED-7885 on enclosed inquiry slip

WORK RECORD HOLDERS made of transparent plastic



Bound in leatherette or plastic tape, Naplasco line of protective plastic envelopes has metal reinforced corners. Standard forms and sizes are available in wide variety of styles. Special shapes and sizes are offered to meet specific industrial requirements. Heavy gage cellulose acetate is used on these transparent plastic work record holders. Made by **National Plastic Co.**, 2591D E. Foothill Blvd., Pasadena, Calif.

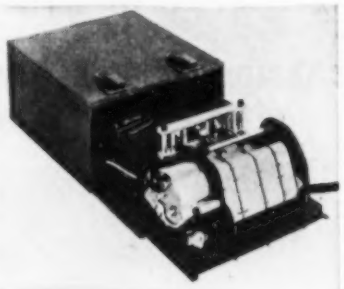
For more details circle NED-7886 on enclosed inquiry slip

THREE-WAY OUTLET installed without stripping wire

Extension cords of any length can be made quickly with this Lifetime three-way electric outlet. Cord need not be stripped of insulation. To install outlet, open the latch, insert the wire, close cover and job is finished. Closing of cover causes metal points to pierce insulation and make electrical contact with wire. Unit is listed by Underwriters' Laboratories and is rated 15 amp on 125-v ac. Standard colors are pearl or brown plastic. Made by **Academy Electrical Products Corp.**, Dept. NED, 3842 Ninth Ave., New York 34, N. Y.

For more details circle NED-7887 on enclosed inquiry slip

IMPACT DETECTION DEVICE traces damage to shipped goods



Impact damage to products in shipment and time it occurred can be traced with the Impact-O-Graph, an instrument which registers and records impacts or jolts in three directions. Three stylii or markers record impact on special wax-treated and time calibrated tape which is driven by electrically wound clock at rate of one inch per hour. Clock operates for 60 days on one battery, and tape lasts 28 days in continuous operation. Device also records approximate intensity of impact in terms of foot-pounds making it possible to determine which impact caused damage. Time record fixes responsibility for damage, and where no movement is recorded shipping delays can be ascertained. Two models are available: one for use within packages or crates; the other for railroad use to check car handling and roadbed conditions. Made by **Impact-O-Graph Corp.**, Room 801, 1900 Euclid Ave., Cleveland 15, O.

For more details circle NED-7888 on enclosed inquiry slip

TAC does what no other tool can do!

AT LAST! AN OPEN-END RATCHET WRENCH — the world's first true *universal* wrench. A patented design for connections on tubing, rods, piping, conduit, studs, etc. Sixty-four socket sizes from ⅜" to 4". Smallest effective ratcheting arc yet — 5° to 7½°. TAC will also do every job any ordinary ratchet wrench will do: one TAC set replaces literally dozens of single-purpose hand tools.

makers of advanced tools for industry

TAC

TAC is the registered trademark of
TUBING APPLIANCE CO.
7112 South Victoria • 10321 Anza Ave. • Los Angeles, Calif.

For more details circle NED-7889 on enclosed inquiry slip

. . . with new-type "National" PLACE BOLTS

They're more economical—self-locking—stronger!
MORE ECONOMICAL—Now, for the first time, new Slotted-Type Place Bolts can be made of carbon as well as alloy steels—making possible savings in costs on all applications wherever a locking bolt is needed.
SELF-LOCKING—Place Bolt's spring-action head, tightened against a rigid seat, locks the bolt against all involuntary loosening influences including vibration, and insures against impact or shock failure.
STRONGER—One-piece, all-metal, new Slotted-Type Place Bolts now have reinforced continuous-grained heads that increase their yield and fatigue strength.

THE NATIONAL SCREW & MFG. CO.
Cleveland 4, Ohio

For more details circle NED-7890 on enclosed inquiry slip

TORNADO® CLEANING

Saves YOU Time, Labor, Money

Modern plant maintenance demands modern equipment. Let Tornado speed up your cleaning time, reduce man hours and lower operator fatigue. The Breuer representative can quickly show you many improved methods for cleaning floors, walls, ceilings, fixtures, stairs and machinery.

TORNADO INDUSTRIAL VACUUM CLEANERS
Versatile and powerful machines for one stroke wet or dry positive pickup. Plenty of capacity for fewer emptying operations and attachments for every job. Bulletin 600.

For cleaning:
Floors, walls, ceilings, fixtures, stairs, machinery. Picks up dirt, dust, wood or metal chips, liquids or any combination.

TORNADO FLOOR MACHINES
A rugged and powerful machine that operates smoothly reducing operator fatigue. Self-retracting wheels and automatic brush coupler speed up operational time. Machines will scrub, polish, pumice, buff, wax, shampoo, steel wool and sand. Bulletin 583. For: Wooden and concrete floors, linoleum, asphalt or composition tile, carpets, and marble.

TORNADO PORTABLE BLOWER
A dependable blast of clean dry air that blows dirt, metal chips and oily fuzz out of electrical motors, machinery and other hard-to-get-at places. Attach a bag and hose and use it for a portable vacuum cleaner. Bulletin 579.

BREUER ELECTRIC MFG. CO.
5116 N. Ravenswood Avenue • Chicago 40, Illinois

For more details circle NED-7891 on enclosed inquiry slip

SAFE HANDS LOSE NO TIME

Natural-rubber treaded*

Grab-it

Non-slip grip, wet or dry; extra protection against cuts; and 5 to 10 times longer wear

Rubber-Treaded wearing surface wears like a tire. Far outlasts higher priced leather.

Non-Skid: Rough surfaced, waterproof rubber grips firmly, safely, easily—wet or dry.

Strong, Comfortable Fabric lining and back. Feels like any canvas glove. Flexible.

Big, Full Hand Size with elastic on back to fit snug on any hand.

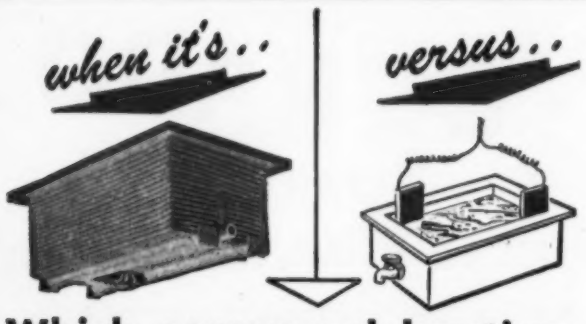
For oily work we recommend NEOX coated gloves

* *Also NEOX (reinforced neoprene) and plastic coatings, over-all or palm-and-thumb only. Gauntlet, safety cuff and knitwrist styles.*

Smart management supplies good work gloves
Safer, more comfortable coated-fabric gloves speed work handling, reduce lost-time accidents, improve comfort and job attitude. *And cost less because they wear far longer.*

Edmont Mfg. Co., 1240 Walnut St., Coshocton, O.
World's largest maker of coated industrial gloves

▲ For more details circle NED-7892 on enclosed inquiry slip ▲



Which compound heating method would YOU choose?

One method concentrates heat. The other method distributes heat evenly, without allowing hot spots to burn or carbonize tank contents.

One method permits cold, unheated areas in the tank. The other method gently, effectively spreads heat to entire contents without permitting cold lumps to remain.

Which would you choose? The "high-wattage concentrated" design or the "low-wattage distributed" design?

Thousands of users for 30 years have chosen the Sta-Warm design which evenly, economically *distributes* heat. During these years Sta-Warm has developed a full line of compound and soft metal melting tanks, pots, kettles which are highly adaptable to your requirements. Many special accessories are offered.

Why not find out about them today?

Sta-Warm ELECTRIC CO.
130 N. CHESTNUT ST., RAVENNA, OHIO

▲ For more details circle NED-7893 on enclosed inquiry slip ▲

Get This Super-Handy HOIST and PULLER for 30-day Free Trial!

The *Jiffy Lift* Hoist & Puller weighs only 12 lbs., yet has ¾-ton capacity. Single control for up and down. Quick action, ratchet-type. Thousands of enthusiastic users. $45.00 F.O.B. St. Louis. Try it a month FREE!

BLACKBURN *Jiffy Lift*

Lightest! Simplest! Fastest!

HUNDREDS OF USES

MAIL COUPON TODAY

JASPER BLACKBURN CORPORATION
35 Madison St., St. Louis 6, Mo.

☐ Send us full information about "Jiffy Lift".
☐ Send us one "Jiffy Lift" for 30 Day FREE TRIAL.

Your Name and Title _____
Firm _____
Address _____
City and State _____ NED

▲ For more details circle NED-7894 on enclosed inquiry slip ▲

PULSE GENERATOR has four selective settings

Filtered for radio interference and available hermetically sealed for low pressure operation, Intervalometer pulse generator has four selective settings: one per 2 seconds and one, two or four per 1 second. Other rates, accurate to plus or minus 0.5-second, are available in these ratios up to 10 per second. Pulse duration, regardless of dial setting, is 1/25-second, with accuracy plus or minus 5 per cent. Designed for aircraft instrument panels, generator's specifications call for operation from minus 50 to plus 150° F and up to 15 g. Rate selection can be either manual or by remote control. Made by **Photographic Products, Inc.,** 6912 Romaine St., Hollywood 38, Calif.

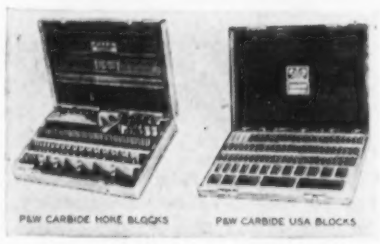
▲ For more details circle NED-7895 on enclosed inquiry slip ▲

SMALL SELENIUM RECTIFIERS are hermetically sealed cartridges

Assembled in half-wave cartridges with current ratings from 300 microamperes to 60 milliamperes, line of hermetically sealed selenium rectifiers is designed for such applications as airborne radar components, guided missiles, bias supplies and modulators. Individual cartridges accommodate up to 400 cell components with ratings up to 8000 v dc. By connecting number of units in series, up to 250,000-v ratings have been obtained. They are capable of withstanding up to 100-g acceleration and temperatures to 100° C. Outside diameters vary from 3/16 to 1¼ in. depending upon current ratings. Made by **International Rectifier Corp.,** 6807-9 S. Victoria Ave., Los Angeles 43, Calif.

▲ For more details circle NED-7896 on enclosed inquiry slip ▲

CARBIDE GAGE BLOCKS offer maximum resistance to wear



Solid carbide precision gage blocks, both USA and Hoke, are available in sizes from 0.050 to 4.000 in. as sets, individually or as wear blocks in sizes of 0.050 and 0.100 in. Square designed Hoke blocks permit use of internal tie rods for rapid assembling of attachments without use of outside clamps. Precision lapped at 68° F, blocks have excellent wringing qualities and are rust and corrosion resistant. One-inch blocks and smaller are accurate to tolerance of plus 0.000004-in. and minus 0.000002-in., and sizes over 1 in. are accurate to the same tolerance per inch of length. Made by **Niles-Bement-Pond Co.,** Pratt & Whitney Div., 20 Charter Oak Blvd., West Hartford 1, Conn.

▲ For more details circle NED-7897 on enclosed inquiry slip ▲

UNIVERSAL *Flexible* METAL HOSE

— Where to use it — How to select it
— Valuable engineering assistance

Here are two practical guides:

1. UNIVERSAL CATALOG #U-101

For simple applications of metal hose and tubing, rely on this catalog. It will save you time and help to simplify your choice. This quick-reference catalog contains specifications on every type of Universal Flexible Metal Hose, Tubing and Fittings. It lists typical applications—covers conveyance of solids, fluids and gases at low or elevated temperatures and pressures. Helpful cross-section illustrations for construction details. Send for your copy today!

2. UNIVERSAL ENGINEERING SERVICE

Universal is equipped to offer specific recommendations for your difficult metal hose requirements. Send complete information on your operating requirements. We'll send you our experienced recommendations.

UNIVERSAL *Flexible* METAL HOSE

ANY TYPE — ANY METAL — ANY SIZE

Square-Locked Flexible Tubing • Seamless Flexible Hose
Interlocked Flexible Hose • Diesel Engine Exhaust Hose
Hose Assemblies and Couplings

UNIVERSAL METAL HOSE CO.
2155 South Kedzie Avenue Chicago 23, Ill.

▲ For more details circle NED-7898 on enclosed inquiry slip ▲

IT'S ALLIED FOR RCA electron tubes for industry

ALL TYPES IN STOCK
- Vacuum Power
- Thyratrons
- Vacuum & Gas. Rectifiers
- Ignitrons
- Cold-Cathode
- Phototubes
- Oscillograph Tubes
- Camera Tubes
- Monoscopes
- Special Types

Quick, Expert Service on all RCA special-purpose industrial tubes

ALLIED maintains in stock *for quick shipment*, the world's largest distributor inventory of RCA special-purpose tubes—*of all types*. We specialize in supplying the needs of industrial, broadcast, governmental and other users. To save time, effort and money—phone, wire or write to ALLIED for *quick* shipment. Fill *all* your needs from the *complete, dependable* electronic supply source.

FREE Interchangeability Directory

Valuable guide to selection of proper RCA tube type replacements. Lists 1600 tube types. Write for Free RCA Guide No. 37-046.

see your 1952 ALLIED catalog

Refer to your ALLIED Catalog for *all* electronic supplies—parts, tubes, test instruments, tools, audio amplifiers, accessories—available from the world's largest stocks. Write today for your FREE copy of the *complete* 212-page 1952 ALLIED Catalog.

ALLIED RADIO
833 W. Jackson Blvd., Dept. 37-K-1
Chicago 7, Ill.

Everything in Electronics from ONE Source

▲ For more details circle NED-7899 on enclosed inquiry slip ▲

di-acro PUNCH

NEW DOUBLE PURPOSE PRESS

Available in two sizes 6" and 12" throat depth

Now you can punch holes of various shapes as large as 4" diameter in 16 gauge steel—also blank, draw, emboss, form,—all with the new DI-ACRO Punch. It is ideal for both experimental and production work.

The precision ground triangular ram of this double purpose press prevents punch head from turning, assuring perfect alignment at all times.

A Turret Stripper of exclusive DI-ACRO design automatically strips material from punches of all shapes. Roller Bearing cam action develops 4-ton pressure with minimum effort. Adjustable gauges assure exact location of holes.

Send for* "DIE-LESS DUPLICATING" *Catalog
Gives the full story of the DI-ACRO Punch, and also DI-ACRO Benders, Brakes, Shears, Rod Parters, Notchers, as well as the new DI-ACRO Vari-O-Speed Powershear and Hydra-Power Bender.

DI-ACRO is pronounced "DIE-ACK-RO"

DI-ACRO PRECISION MACHINES DIE-LESS DUPLICATING — O'NEIL-IRWIN MFG. CO.
354 EIGHTH AVENUE • LAKE CITY, MINN.

▲ For more details circle NED-7900 on enclosed inquiry slip ▲

Don't ruin your Bins

Vibrate them with a TYPE F
CLEVELAND AIR VIBRATOR

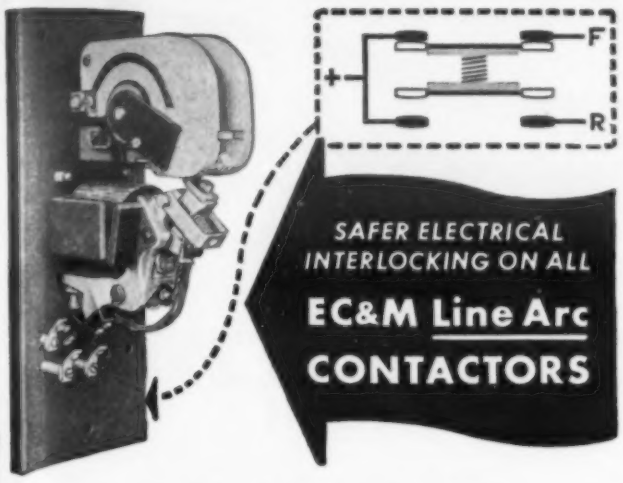
- Steel Chips . . . Dry Colors . . . Concrete . . . Fertilizer . . . Sand . . . Coal . . . Soap . . . Sawdust . . . Vegetables . . . Chipped Ice . . . Meat . . . Candy . . . Wood Chips . . .

Or any other 'granulars' free up fast with a Type F Cleveland AIR Vibrator. Eliminate plugged or arched conditions. Write for Catalog No. 105 for complete details.

THE CLEVELAND VIBRATOR COMPANY

2745 Clinton Ave. • Cleveland 13, Ohio

▲ For more details circle NED-7901 on enclosed inquiry slip ▲



Two sets of double-break contacts—*isolated from each other*—no carry-over from one to the other by an arc.

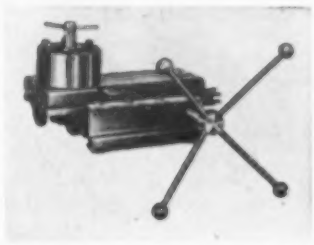
Coin-silver contacts are used on these new electrical interlocks. With two movable contact bridges (instead of one previously used) and *each isolated from the other*, normally-closed circuits *cannot* be *carried over* by an arc to *normally-open* circuits or vice versa. *Safer electrical interlocks*—a good reason for specifying EC&M Magnetic Control.

WRITE FOR BULLETIN 1145

THE ELECTRIC CONTROLLER & MFG. CO.
2698 EAST 79TH STREET • CLEVELAND 4, OHIO

For more details circle **NED-7902** on enclosed inquiry slip

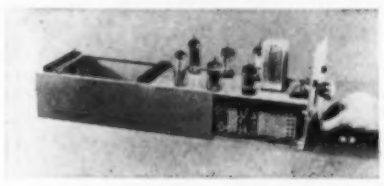
PRECISION BED TURRET
features model improvements



Pilot wheel operation is improved feature in line of heavy duty Newton precision bed turrets used on small lathes to provide maximum tooling for production. Models are designed to fit 10 and 11-in. Logan lathes, 10-in. Powr-Kraft, 10-in. Atlas and 12-in. Craftsman lathes. All steel turret head accommodates six tool positions and is self-indexing with precise repeating accuracy assured by hardened and ground tool steel mechanism. Slide and bed have ground bearing surfaces to assure stroke accuracy. Both pilot wheel and lever-operated models are available. Made by **A. K. Tool Co.**, Dept. NED, 2029 Blake Ave., Los Angeles 39, Calif.

For more details circle **NED-7905** on enclosed inquiry slip

ELECTRONIC EQUIPMENT CHASSIS
for circuit layout and construction



Designed for maximum accessibility to all components, for high speed wiring and assembly and for easy servicing. Basic Chassis can be used as standard for laying out circuit elements and easily fabricating them as unit subassemblies. Heart of chassis is terminal mounting board system whereby tube sockets and circuits are mounted and interwired as individual subassembly for mounting in chassis. Hundreds of prepunched holes on terminal board permits most any circuit pattern to be wired without modification. Miniature terminals staked into holes hold components for soldering. Made by **Alden Products Co.**, 117 N. Main St., Brockton 64R, Mass.

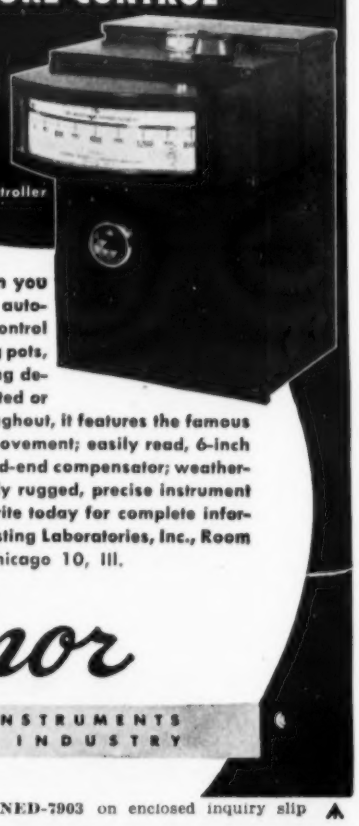
For more details circle **NED-7906** on enclosed inquiry slip

LAMP HOLDERS
accommodate spot and flood lamps

Spring action socket, which assures positive electrical contact and snug fit of lamp to lamp holder rim, prevents breakage of lamp due to changes in temperature or physical variations in improved line of lamp holders. Of cast aluminum and completely wired, holders are offered in two models; one to accommodate 150-w PAR-38 lamp, while other is designed for R-40 300 and 500-w mogul base lamps or medium base lamps with adaptor. Both are equipped with stem having ½-in. tapered thread. Made by **Guardian Light Co.**, 303 Lake St., Oak Park, Ill.

For more details circle **NED-7907** on enclosed inquiry slip

HERE'S LOW COST, POSITIVE TEMPERATURE CONTROL with *Alnor* ACCURACY



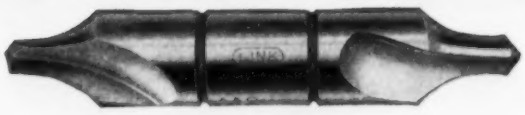
Now—at a cost far less than you may think—you can bring automatic, precise temperature control to industrial furnaces, melting pots, ovens—in fact, to any heating device whether electrically heated or fuel fired. Alnor quality throughout, it features the famous double air gap pyrometer movement; easily read, 6-inch mirrored scale; automatic cold-end compensator; weather-proof, dust-tight case—a truly rugged, precise instrument at a price you can afford. Write today for complete information and price. Illinois Testing Laboratories, Inc., Room 529, 420 N. LaSalle St., Chicago 10, Ill.

Alnor

PRECISION INSTRUMENTS FOR EVERY INDUSTRY

For more details circle **NED-7903** on enclosed inquiry slip

FAR LESS TIP BREAKAGE with "RING SEAT" CENTER DRILLS



SO YOU WANT MORE FOR YOUR MONEY?

"Ring Seat" Center Drills will do just that! They give you a protected center at no extra cost. They reduce breakage. They are quickly lapped. A rotating felt wick removes heat-treat scale—restores perfect center.

These premium features do give you more for your money!

LINK INDUSTRIES
13838 Elmira Detroit 27, Mich.

FREE CIRCULAR

For more details circle **NED-7904** on enclosed inquiry slip

ROPER ROTARY PUMPS

The Name of Dependability

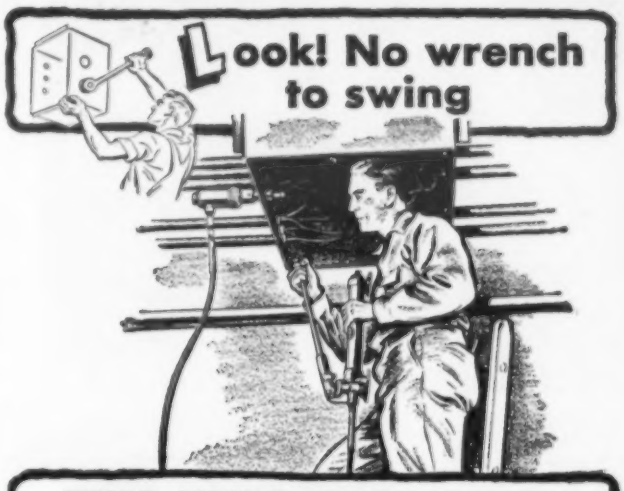
Widely Used in Diversified Industries

Whether your equipment is dependent upon a pump for fuel transfer, coolant work, or hydraulic action, you will maintain greater operating efficiency with the rugged Roper — Series F. This series is built to pump clean liquids of all kinds, and is available in standard or special-built designs in 1 to 300 g.p.m. . . . pressures to 300 p.s.i. WRITE TODAY for Catalog and Complete Information.

GEO. D. ROPER CORP.
670 Blackhawk Park Ave.
Rockford • Illinois

ROPER Rotary Pumps

For more details circle **NED-7908** on enclosed inquiry slip



THIS HYDRAULIC Knock-out Punch is 60% Faster!

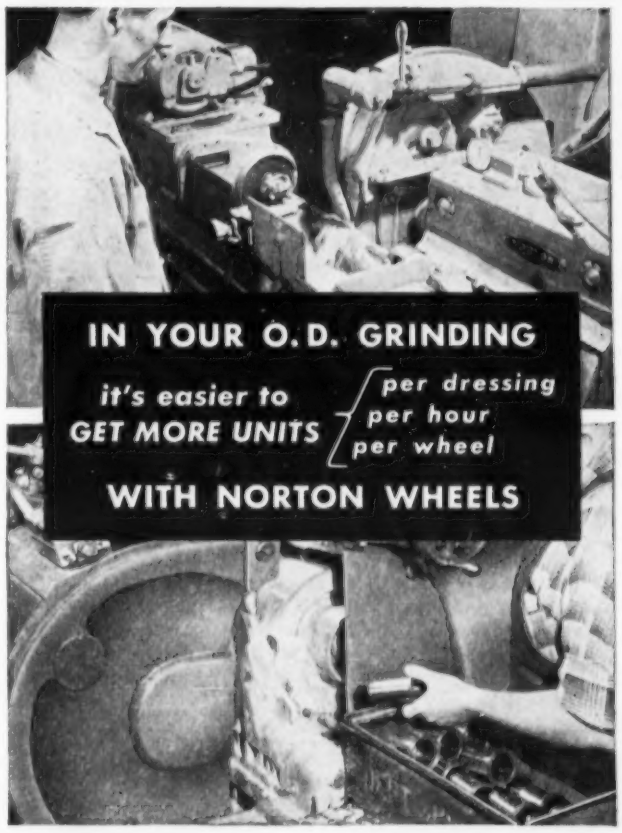
Drive knock-out punches with an amazingly low-cost "Porto-Power" hydraulic jack! A *few, easy strokes* on the pump does it! Compare that with the old-fashioned method of a half-hundred knuckle-busting turns on a wrench. With "Porto-Power," conduit openings are *neat* — workmen are happier, safer — dies last 6 times longer!

Write for FREE BULLETIN 50-B on all Blackhawk Electrician's Equipment. Buy from leading supply houses.

BLACKHAWK

Blackhawk Mfg. Co., Dept. P14101, Milwaukee 1, Wis.

For more details circle **NED-7909** on enclosed inquiry slip



With Norton wheels for cylindrical or centerless grinding it's easy to get exactly the required tolerances and finish . . . in piece after piece . . . hour after hour . . . with a minimum of dressing or replacement. Because:

Norton Wheels Cover Your O.D. Jobs. Whatever your applications, in the *complete* line of Norton ALUNDUM* or CRYSTOLON* wheels you're sure to find exactly the right combinations of abrasives and bonds for top cutting performance and extra long wheel life — and Norton uniformity assures this top performance in *every* wheel.

Norton Service Covers Your Grinding Problems. Your Norton Distributor can practically always tell you the types of wheels you need. Backing him is the Norton Abrasive Engineer in your area. And behind both is the technical staff of the world's largest abrasive manufacturer.

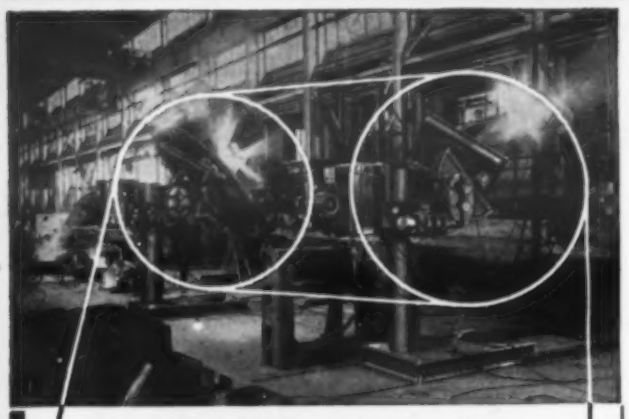
Norton Stocks Cover Your Delivery Requirements. Norton Distributors keep ample stocks of all popular O.D. wheels. Larger stocks are maintained in Norton warehouses in key cities, and you can count on prompt deliveries from Norton Company's complete stocks in Worcester.

Handy Illustrated Booklet contains many helpful facts and provides convenient selection charts. Ask your Norton Distributor, or write direct for Form 2006. NORTON COMPANY, Worcester 6, Mass. Distributors in all principal cities.

*Trade-Marks Reg. U.S. Pat. Off. and Foreign Countries

NORTON ABRASIVES
Making better products to make other products better

For more details circle **NED-7910** on enclosed inquiry slip



More WELDING going on here....

More welding and less time spent in flopping, propping up and crawling around weldments is the end result of the C-F Positioners in this welding department.

Mounted on C-F Welding Positioners, weldments can be quickly brought into position for a downhand pass — better, more uniform welds with resulting economies and production increases follow. Welders spend more time welding when they work with C-F Positioners because one "set-up" on the table allows them to maneuver the job without assistance, whether hand or power operated Positioners are used.

Power operated, variable speed C-F Positioners, with table rotation speeds in any range from 0 RPM and up, coupled with table tilt to 135° from the horizontal make them the logical choice for any production welding operation. Like all C-F Positioners, they have drilled tables for easy set-ups or tables can be quickly removed for installation of special fixtures or jigs. Write for Bulletin WP 24. CULLEN-FRIESTEDT CO., 1304 S. Kilbourn Ave., Chicago 23, Ill.

CULLEN-FRIESTEDT CO.
CHICAGO 23, ILL.

C-F positioned welds mean better, more economical welds

▲ For more details circle **NED-7911** on enclosed inquiry slip ▲

MORE SPEED MORE SUPPORT

MAKES BAND-SAWS CUT AT ANGLE UP TO 45%

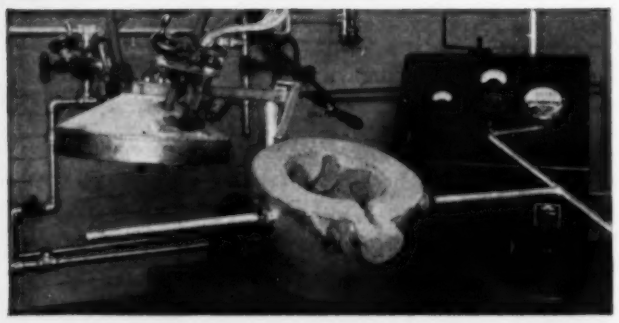
PADDOCK BALL-BEARING BAND-SAW GUIDES (MODEL 20) enables a 36" machine to cut material 22" wide at an angle up to 45%. Guides are quickly adjusted to width, thickness, and blade angle. The lower unit pictured at right shows angular adjustment. Note the interchangeable ball-bearing wheel action. Turning with the blade, the wheels hold the working portion of the blade as in a frame —for faster cutting, less blade breakage, and cutting more materials. Install inexpensive PADDOCK GUIDES and you save money as well as make old or new band saws cut more efficiently. Write for prices and details on PADDOCK GUIDES—today!

PADDOCK TOOL CO.
Guide Makers Since 1920
1418 Walnut St. Kansas City, Mo.

Paddock BALL-BEARING **BAND SAW GUIDES**

▲ For more details circle **NED-7912** on enclosed inquiry slip ▲

GOT A small METAL-MELTING PROBLEM? *Here is an efficient economical answer!*



15 lb. capacity, Pot Tilting Electric Furnace melts any metal quickly, easily

A versatile small furnace for laboratory, pilot plant and small production. Engineered for economy. Designed for easy, practical use. Pot can be used as crucible or tilted to pour directly into molds. Roof lifts and swings for easy loading. Complete with controls. Literature on request.

WRITE FOR DETAILS

DETROIT ELECTRIC FURNACE DIVISION
KUHLMAN ELECTRIC COMPANY
1060 26th St. • BAY CITY, MICHIGAN

Foreign Representatives: In BRAZIL — Equipamentos Industrias "Elsa" Ltd., Sao Paulo; CHILE, ARGENTINA, PERU and VENEZUELA: M. Castellvi Inc., 150 Broadway, New York 7, N. Y.; MEXICO: Casco, S. de R. L. Atenas 32, Despacho 14, Mexico City, D. F.

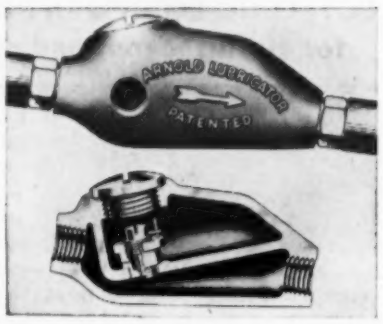
▲ For more details circle **NED-7913** on enclosed inquiry slip ▲

RESPIRATORS
three cartridge sizes available

Line of Bureau of Mines-approved chemical cartridge respirators known as 800 series includes styles for protection against low concentrations of industrial gases and vapors, as well as metal fumes, mists and dusts. Features include facepiece with feathered rolled edges for snug fit, exhalation valve positioned to minimize dust interference with operation, choice of 60, 85 or 100 cc cartridges and double adjustable elastic headbands. Made by **Willson Products, Inc.**, 207 Thorn St., Reading, Pa.

▲ For more details circle **NED-7914** on enclosed inquiry slip ▲

PNEUMATIC TOOL LUBRICATOR
supplies "oiled air" to tools



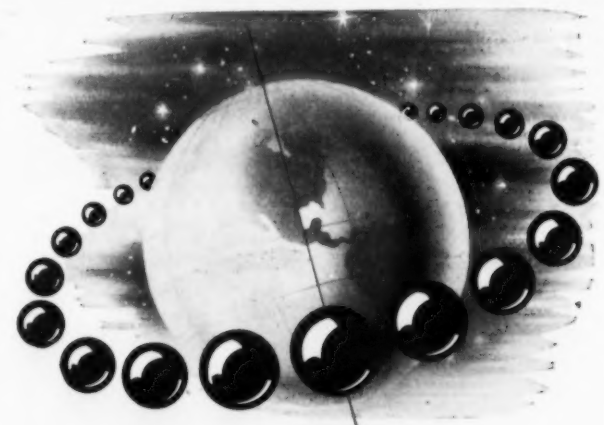
When placed in an air line, this No. 2 lubricator supplies "oiled air" to working parts of pneumatic tools. An adjustable feeder enables operator to adjust oil flow to needs of job. Oil may be added under line pressure. Window shows how much of ½-pt capacity remains in lubricator. Measuring 3½ x 3½ x 7 in. and weighing 32 oz, unit can be installed and causes but little drag on air line. Shape allows it to be pulled around corners without catching. Made by **Rucker Co.**, 4228A Hollis St., Oakland 8, Calif.

▲ For more details circle **NED-7915** on enclosed inquiry slip ▲

SMALL STAKING PRESS
will punch, broach, form, rivet

Tools are guided by adjustable cross arm mounted on tool steel column of Micro press for light duty precision staking, punching, piercing, reaming, broaching, marking, forming and riveting. Hardened, ground and lapped tool steel guide bushing in cross arm insures continuous alignment. Standard adjustable fixture plate on base contains 21 holes ranging from 0.013 to 0.185-in. diameter. Fixture plate and cross plate clearance is adjustable up to 1¼ in. Standard models have hand press lever. Variety of punches with range of end shapes and sizes are stocked. Special model is available with micrometer depth adjustment. Related tools, fixtures and power adaptations are available. Made by **Metalix Mfg. Co.**, 27 Fitch St., Norwalk, Conn.

▲ For more details circle **NED-7916** on enclosed inquiry slip ▲



Around the World it's

HOOVER BALLS

made of

CHROME STEEL - CARBON STEEL - STAINLESS STEEL BRASS - BRONZE AND MONEL METAL

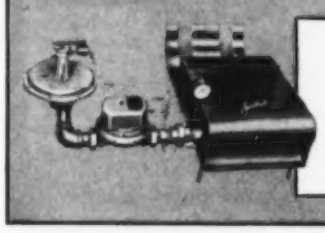
"America's Foremost Ball Manufacturer"

HOOVER BALL AND BEARING CO.
Ann Arbor, Michigan

▲ For more details circle **NED-7917** on enclosed inquiry slip ▲

FOR EASIER CONVERSIONS THE NEW, *gas* COMPLETE FACTORY ASSEMBLED

Janitrol
MODEL SC-05



TWO UNITS, 325,000 TO 750,000 BTU PER HOUR

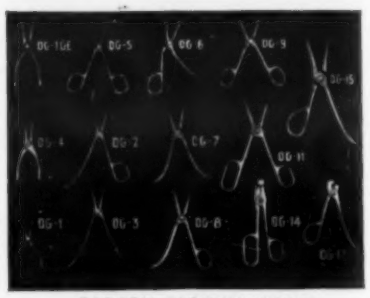
Among the many design features of the new Janitrol Conversion Burners simpler installation and full accessibility are most important for industrial applications. Optional equipment includes instantaneous flame failure protection with complete control panel to meet the requirements of gas utilities, city, underwriters and insurance companies.

Write today for complete specifications and performance data.

SURFACE COMBUSTION CORPORATION • DEPT. H, TOLEDO, OHIO

▲ For more details circle **NED-7918** on enclosed inquiry slip ▲

Equipment to Speed Your Defense Production!



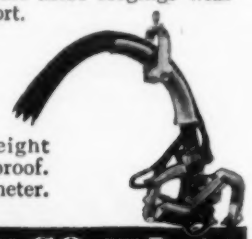
OSBORN SAFETY PLIERS

Save fingers, eyes and dies with Osborn Safety Pliers . . . made of Osmolloy, the sturdy, long lived aluminum alloy that will flatten under impact, leaving dies undamaged. Thousands now in use. Write for literature!

OSBORN FORGING TONGS

Here is new ease in handling drop forgings. Aluminum construction cuts tong weight over 40%. Chrominum-nickel replaceable jaw inserts makes them heat resistant. Workers can handle more forgings with less effort.

OSBORN CABLE SADDLES



The perfect support for overhead cables and water cooling hose leading to portable resistence-welding guns. Lightweight alumimum construction. Kink-proof. Takes cable bundle 2½" in diameter. Clevis clearance is 3½".

OSBORN MFG. CO., Inc.
Making Jobs Safer and Easier
WARSAW ★ INDIANA

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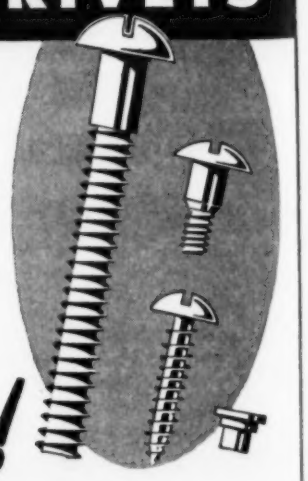
Beaver·Bilt

SCREWS
STUDS • RIVETS



Standard and Special Types Made for Your Particular Requirements

COLD HEADING PROCESS

Prompt Delivery!

URGENT ORDERS GIVEN SPECIAL ATTENTION
WIRE OR WRITE US ABOUT YOUR NEEDS

Beaver Industries
METAL FASTENER DIVISION
1500 WEST ADAMS STREET, CHICAGO 7, ILL

▲ For more details circle **NED-7920** on enclosed inquiry slip ▲

6 TO 1 ONE Indicator Plug Connects to any of SIX Thermocouple Jacks

MULTI-POINT PYROMETER INDICATOR

Accurate
Sturdy

Indicates temperatures of various applications.

Stocked in five temperature ranges

Polarized Jacks and Plugs of thermocouple materials.

Instrument compensated automatically for cold junction temperature changes and instrument temperature resistance coefficient.

WRITE FOR CATALOG SECTION 25T

Thermo Electric CO. INC. FAIR LAWN NEW JERSEY

▲ For more details circle **NED-7921** on enclosed inquiry slip ▲

The Clarin STEEL FOLDING CHAIR is guaranteed for 10 years

No.2417-LL

Every shipment of Clarin Chairs is accompanied by a 10-year guarantee in writing against breakage under ordinary use. We can do this because the finished Clarin Chair embodies only the finest in durable materials, skillfully assembled to make the strongest and most comfortable chair obtainable.

The Clarin Chair is designed to permit aligning and spacing in conformity with fire codes and safety regulations. Can be set up and secured in uniform rows.

CLARIN MFG. CO.
4640 West Harrison St., Dept. 15.
CHICAGO 44, ILLINOIS

There are more Clarin steel folding chairs in institutional service than any other make

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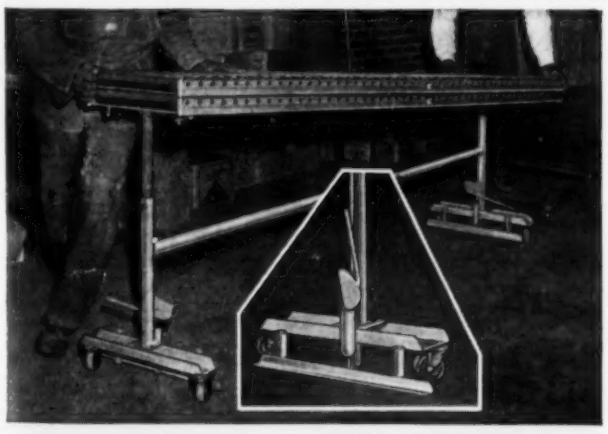

PORTABLE WHEEL and ROLLER GRAVITY CONVEYORS

Save Money on Your Handling Jobs

Standard 5' and 10' sections, and 45° and 90° curves on portable tripod stands or portable section stands (as illustrated) with or without "Pelican" Floor Lock. (see insert)
Ideal for warehousing, loading and production line use. Easy to handle and move.

ASK FOR FOLDER 1251

POWER UNITS
Belt type Horizontal and Floor-to-Floor "Power Helpers"

Live Roller CONVEYORS

METZGAR **METZGAR CO.**
416 Douglas St., N. W.
GRAND RAPIDS 4, MICH.

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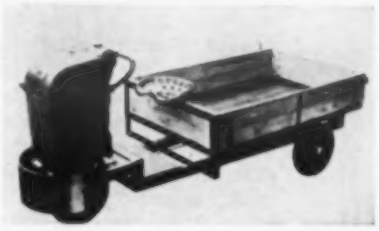
MATERIALS HANDLING TRUCKS
line includes cranes, lifts, tugs



Equipped with 3-hp gasoline engine and three-speed-and-reverse gearbox, Wrigley model 332 general purpose motor truck has gear ratios available to suit condition and load, with road speed range up to 10½ mph. It is equipped with steel body with 18-in. high wooden floor, 12-in. hinged sides and pan type tractor seat. Steel plate bumper protects power unit. Length is 8 ft 6 in., width is 3 ft 4 in., and capacity is 1 ton. Distributed by **Hambro Trading Co. of America,** Hambro Machinery Div., 352 Fifth Ave., New York, N. Y.

▲ For more details circle **NED-7924** on enclosed inquiry slip ▲

POWDERED LUBRICANT
in "squeeze" type flexible container

Air-floated graphitoid lubricant, Lub-a-Spray, is now available in hand size flexible containers. Gentle squeeze sends puff of powder lubricant into crevices between wood, leather or metal parts. Container fits into pocket, yet holds considerably more lubricant than previously offered puffer gun. Powder is also available in bulk packages. Made by **Panef Mfg. Co.,** Dept. 101, 102 E. Walnut St., Milwaukee 1, Wis.

▲ For more details circle **NED-7925** on enclosed inquiry slip ▲

CIRCULAR SAW SET
can be carried in apron pocket

Adjustment slot on model 10 Tru-Circle saw set accommodates circular saw blade diameters from 6 to 10 in. Using stake-set principle, tool is sturdy steel jig with upright spring-mounted steel setting stake. Its size permits carrying in apron pocket or tool box. Tool steel anvil is permanently fixed to setting stage and is milled at precise angle to give set of 10 degrees or more to teeth. Uniform setting of all teeth around blade is assured. Once blade is adjusted over anvil, light tap with hammer sets teeth. Use can be on cutoff, rip, combination, hollow ground combination and novelty saws. Set sells for $2.95. Made by **A. D. McBurney,** Dept. NED, 317 E. Fourth St., Los Angeles 13, Calif.

▲ For more details circle **NED-7926** on enclosed inquiry slip ▲

THE BIG "3"

Capable of rough cutting plus blending of welds.

Only really flexible grinding wheel ever offered.

Withstands extremely rough usage—extra safe.

BAYFLEX • DURACUT • SAF-T-CUT, reinforced abrasive disc-wheels . . the masters of your weld grinding and finishing problems. Greater resiliency and safety make these "Big Three" products first choice in foundries, metal fabricating and welding shops.

BAY STATE ABRASIVE PRODUCTS CO.
Westboro, Mass.
Branch Offices and Warehouses—Chicago, Cleveland, Detroit, Pittsburgh
Distributors—All principal Cities
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BAY STATE

Send for latest information-packed "BIG-THREE" catalog. It contains such data as mounting instructions, recommended speeds, charts, specific applications, etc.

▲ For more details circle **NED-7927** on enclosed inquiry slip ▲

Engrave ...PANELS UP TO 25" WIDE IN YOUR OWN SHOP WITH THE *NEW* ENGRAVOGRAPH
Portable Model 1-S

TRACER GUIDED FOR UNSKILLED LABOR

The *only* portable machine which reproduces 15 sizes from one master alphabet.

The *only* one with *adjustable* copy holding slides for multiline engraving in one set-up.

Self-centering holding vise for nameplates.

Send for Booklets
I-S26—portable model
H-26—heavy duty model

NEW HERMES, Inc. *new hermes* Engravograph
13-19 University Pl., N. Y. 3, N. Y.
CANADA: 359 St. James St., Montreal
World's Largest Manufacturer of Portable Engraving Machines

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BUSHINGS

FLANGED TYPE BEARINGS

BABBITT LINED BEARINGS

SPECIAL BUSHINGS

Our normal production includes special types of bearings in sizes up to 30" Outside Diameter by 24" Long, or 22" Outside Diameter by 30" Long. As a result we have accumulated a large stock of patterns of which those bearings illustrated are representative.

If you have need of special bearings, why not check your requirements against our pattern sizes? You may save a lot in costs and time that way.

Write today for Bulletin

BRONZE BEARINGS, INC.
340-344 NORTH AVENUE—EAST
CRANFORD, N. J.

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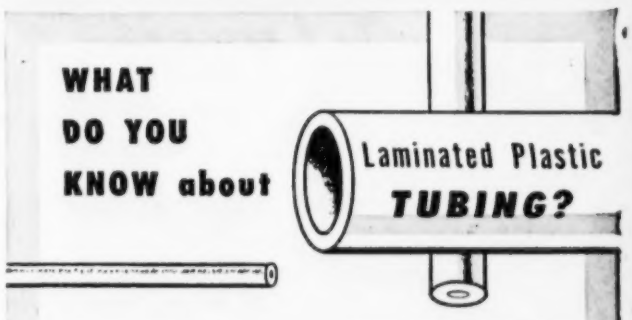
WHAT DO YOU KNOW about Laminated Plastic TUBING?



Take Synthane laminated plastic tubing for example. Do you know that it is non-metallic, corrosion resistant, has excellent dielectric strength? Do you know it is made in rolled and molded forms in many grades and sizes? Do you know which grades are best for what purposes? Or how Synthane compares to metal tubing in strength and weight?

For the answers to these and other tubing questions you may have, use the coupon below to get your copy of the Synthane Tubing Folder.

Sheets
Rods
Tubes
Molded Macerated
Molded Laminated
Fabricated Parts

SYNTHANE

SYNTHANE CORPORATION
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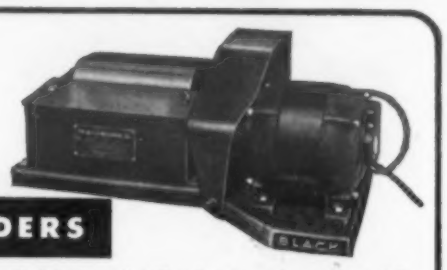
OAKS, PENNSYLVANIA

Gentlemen:
Please send me the Synthane Tubing folder.

Name _____
Firm name _____
Address _____
City _____ Zone _____ State _____

▲ For more details circle **NED-7930** on enclosed inquiry slip ▲

PORTABLE...MOTOR DRIVEN



SPREADERS

Made for all kinds of adhesives . . . hot or cold. Applies an even, economical coat. 115 volt AC motor. Floor stand with casters available if desired. Write for Bulletin 11-A.

MIXERS

Made in 2, 5, 7½, and 15 gal. sizes. Powder added gradually through oscillating sifter. Arm hinged so that it can be tilted out of the way. Two way agitation. Write today for Bulletin 11-I.

THE BLACK BROTHERS CO., INC.
MENDOTA, ILLINOIS, U. S. A.

For more details circle NED-7931 on enclosed inquiry slip

DUST PREVENTIVE SPRAYER
minimizes dust in coal bin areas

Self-contained and pressurized, this Dustroyer sprays Sealtite dust preventive over coal during delivery to prevent dust. Material not only lays the dust, but it puts sealing coat around coal to prevent future creation of dust. Spray unit is heavy gage steel and has interchangeable nozzle to furnish stream or spray jet. It is refilled readily and pressure is charged by compressed air or tire pump. Model shown has additional carbon dioxide bulb filler cap for field charging. Made by **Midland Sealtite Corp.**, 608A Union Commerce Bldg., Cleveland 14, O.

For more details circle NED-7934 on enclosed inquiry slip

MAGNETIC OUTLET FINDER
finds outlets in underfloor raceways

When placed on wood, concrete or linoleum floor surfaces and moved about by hand, this magnetic outlet finder will locate concealed outlets in steel underfloor raceways. Noticeable magnetic "draw" or pull is felt when finder passes over steel duct. Draw increases as submerged outlet is approached, maximum pull being exerted when finder is centered over outlet. Permanent magnet-equipped unit has floor penetration range up to 1½ in. Size of unit is 2¼ in. high and 2¼ in. diameter. Weight is 2¼ lb. Made by **National Electric Products Corp.**, Thirteenth Floor, Chamber of Commerce Bldg., Pittsburgh 19, Pa.

For more details circle NED-7935 on enclosed inquiry slip

MAGNETIC STARTER
rated at 10 hp, 220-550 v ac

Equipped with renewable rectangular type contacts of silver for maximum arc quenching properties and low contact resistance, series YE magnetic starter is rated at 10 hp, 220-550 v ac, three-phase. Size is designated as in between No. 1 and No. 2 starters. Terminal boards are molded of arc-resistant alkyd and equipped with pressure connectors. Starter measures 4¼ x 6¼ x 10¾ in., but does not sacrifice wiring space. Made by **Furnas Electric Co.**, 1009 McKee St., Batavia, Ill.

For more details circle NED-7936 on enclosed inquiry slip

Speed fastening in tight places with Bostitch P4 Stapling Plier

Here's quick, easy fastening for many jobs in shipping rooms and manufacturing departments. Bostitch P4 Stapling Plier securely seals small packages, quickly repairs light and medium weight containers. Ideal for sealing flexible corrugated wrappings. Also saves time and materials on many light and medium manufacturing jobs. Powerful action with little effort. For complete details on Bostitch P4 Pliers, write us direct. BOSTITCH, 748 Mechanic Street, Westerly, Rhode Island.

Staple can be applied 4¾" in from edge of container with a Bostitch P4 Plier.

BOSTITCH® fastens it better AND FASTER with wire

ALL TYPES OF MACHINES FOR APPLYING STAPLES
ALL TYPES OF STAPLES APPLIED BY MACHINES

For more details circle NED-7938 on enclosed inquiry slip

RUSTPROOF WATER!
Make this convincing test* with
IMMUNOL

Neutral, non-inflammable, odorless and non-toxic IMMUNOL added to any water will immunize that water against causing rust and at the same time makes a powerful detergent and wetting agent. Parts treated are protected by a clean, non-oily, invisible film.

*Add a small quantity of IMMUNOL to one of two jars containing plain water. Put a screw in each of the jars. Observe them after a day or a week. One screw will be rusted; the other in the IMMUNOL solution will be bright and clean.

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HAAS MILLER CORP.
4TH & BRISTOL STS.
PHILADELPHIA 40, PA.

For more details circle NED-7939 on enclosed inquiry slip

Saves UP TO 80% OF COMMERCIAL BLUE PRINT COSTS!

New Spee-Dee
Pays for itself in 3 months!

● Anyone in your office can quickly make accurate black-on-white or blue-on-white prints up to 24" x 36", from translucent originals, at less than 2¢ per sq. ft. Makes photocopies too. Just plug in. Uses diazo (moist or ammonia dry) process. $155.81 including initial supply of paper and developing powder. Printer only, $149.81. Shipping weight, 85 lbs. *Order the Spee-Dee on 10-days free trial, or write for full facts.* 12" x 18" and 18" x 24" sizes also available from $55.12 up.

10-DAY FREE TRIAL | **PECK & HARVEY**
Mfrs. of Whiteprint, Blueprint & Photocopy Equipment
5733 NORTH WESTERN AVE., CHICAGO 45, ILLINOIS

For more details circle NED-7932 on enclosed inquiry slip

LOW COST PROTECTION FOR MAN AND MACHINE

ELASTICONE®
GUIDE PIN COVERS

JUST SNAP INTO-PLACE
NO TOOLS REQUIRED
NO INSTALLATION COSTS

Elasticones are manufactured in stock sizes. Specify O. D. of bushing and full open height of set when ordering.

Protects Pins and Bushings from nicks, scratches . . . prevents injuries to Die Setters & Operators. Write for full information.

CENTRAL SAFETY EQUIPMENT COMPANY
2202 E. HUNTINGDON STREET, PHILADELPHIA 25, PA.

For more details circle NED-7937 on enclosed inquiry slip

BREEZE *Job-Engineered* BELLOWS

...Give LASTING PROTECTION Where Ordinary Bellows Fail

Breeze welded diaphragm bellows meet the operating life cycle of any equipment in which they are used *because every Breeze bellows design is individually engineered and built for the job.*

Breeze has no "stock bellows," but if you have a vibration problem in ducts, large or small, or want permanently sealed valve enclosures in any type of piping system, or need bellows for torque transmission or other uses, Breeze experience can quickly provide the answer . . . and production can meet your requirements.

A Breeze bellows is dependable because each diaphragm is designed to work well within its elastic limit. This is accomplished by thorough analysis of each application and careful design of the bellows to withstand all requirements. "Job engineering" each individual type eliminates makeshifts, assures efficient performance.

Breeze bellows are made in stainless steel, inconel, monel, nickel, steel, or other weldable alloys.

Feel free to consult us without obligation on your existing bellows requirements, or any other project where reliable welded diaphragm type bellows might solve a design problem.

BREEZE CORPORATIONS, INC.
41-V S. Sixth St., Newark 17, N.J.

OTHER BREEZE PRODUCTS: ACTUATORS · RADIO SHIELDING · AERO-SEAL HOSE CLAMPS

For more details circle NED-7940 on enclosed inquiry slip

Inseparable! EASY-FLO and SIL-FOS brazing

Fast, low-cost metal joining

In joining metals, you always want strong, lasting joints—and you want them in the fastest possible time with the least amount of labor, because that means low cost. Fast, low-cost metal joining is inherent in the make-up and properties of EASY-FLO and SIL-FOS. In fact, with these low-temperature silver brazing alloys you can reduce brazing to a push-button operation and get any output you need.

A Brazing Expert is at Your call

Without obligation, we'll send to your plant one of our experienced Field Service Engineers. He can tell you if, where and how to use EASY-FLO and SIL-FOS to advantage. Just say when you'd like him to call.

24 PAGES OF USEFUL BRAZING FACTS IN BULLETIN 20

Write for a copy . . .

AT THE DETROIT METAL SHOW October 15-19

See an actual production brazing job in action . . . See many examples of EASY-FLO and SIL-FOS brazed parts from both defense and domestic production . . . Talk over your metal joining problems with our experienced engineers . . . **BOOTH F-315**

HANDY & HARMAN 82 Fulton St., New York 38, N. Y.

For more details circle NED-7933 on enclosed inquiry slip

VIBRATION

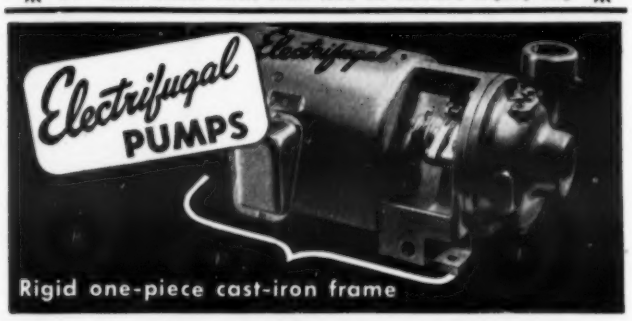
Dresser Style 65 Fittings are ideal where you have vibration to contend with. Their resilient gaskets absorb all normal vibration and deflection movements of pipe . . . preventing stresses that often cause failure. Sizes 3/8" to 2" pipe diameter. Write for STYLE 65 CATALOG.

Complete line of tees, elbows, adaptors, branch tees, etc.

DRESSER "NO-THREAD" FITTINGS

Dresser Manufacturing Division, 59 Fisher Ave., Bradford, Pa. (One of the Dresser Industries). Sales Offices: New York, Philadelphia, Chicago, Houston, South San Francisco.

For more details circle NED-7941 on enclosed inquiry slip



This Is The Difference Between Close-Coupled Pumps

THIS EXCLUSIVE FRAME DESIGN combines maximum space for packing maintenance with exceptional rigidity in a way that no pump assembled to a standard motor can do. Solid cast-iron with no joints from motor end housing to pump casing assures permanent alignment.

Keeps Your Costs Down, Too

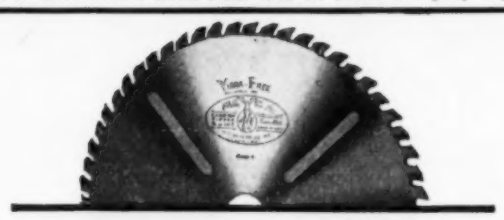
Motor and pump are designed for each other and made in the same plant. You have one responsible source for both . . . one guarantee of satisfaction. Every Allis-Chalmers pump representative is a competent application engineer who will help you select exactly the right pump for your needs. And 94 A-C Certified Service Shops provide nation-wide factory approved service.

Talk over your pump selection problems with your Allis-Chalmers Authorized Dealer or Sales Office or write Allis-Chalmers, Milwaukee 1, Wisconsin for Bulletins 52B6059 and 52B6140. A-3325

Electrifugal is an Allis-Chalmers trademark.

ALLIS-CHALMERS

For more details circle NED-7942 on enclosed inquiry slip



A REVOLUTIONARY DEVELOPMENT

VIBRA-FREE*

CARBIDE TIPPED

MEYCO SAWS

You will be interested in this radically new development IF your carbide tipped saws sound like a police siren; IF they develop a "snaky" cut after short usage; IF they dull fast because carbide tips become chipped.

MEYCO VIBRA-FREE* saws embody a new principle in saw design, a new control over vibration by the use of sound absorbing dampers, which eliminate excessive vibration, excessive noise . . . produce smoother cuts, longer life for carbide tips. You get MORE cuts between sharpenings and operators LIKE to use Vibra-Free* blades. Investigate this revolutionary development TODAY. Write for full information and price list.

*T. M. Reg. U. S. Pat. Off.

19

W. F. MEYERS CO., INC., BEDFORD, INDIANA

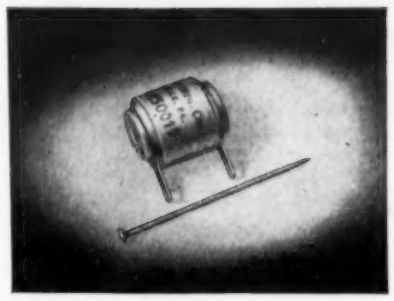
For more details circle NED-7943 on enclosed inquiry slip

SPECIMEN PREPARING UNIT shows third dimension in microscope

Used to deposit thin coating of tungsten, molybdenum or other suitable material by evaporation on specimens prepared for study in an RCA electron microscope, type EMV-6 Shadowcaster provides necessary contrast to allow laboratory technicians to visualize the third dimension of the specimens. This laboratory tool speeds preparation of microscopy specimens by permitting the processing of as many as six glass slides at a time. Device uses 700 watts at 105-125-v 60-cycle ac. Made by **Radio Corp. of America,** Engineering Products Dept., Camden, N. J.

For more details circle NED-7944 on enclosed inquiry slip

SMALL SEALED RESISTORS withstand humidity and corrosion



Hermetically sealed design of Akra-ohm type 1180 miniature resistors offers immunity to effects of humidity, fungus and salt water immersion. They are 19/32-in. long with diameter of 1/2-in. and are rated 0.25-watt at 250 v. Resistance values up to 0.1, 0.3 or 0.4 megohms, depending upon type of alloy used for the noninductive winding, can be supplied. They have solder lug terminals and comply with requirements of JAN-R-93 specification. Made by **Shallcross Mfg. Co.,** 10-F Jackson Ave., Collingdale, Pa.

For more details circle NED-7945 on enclosed inquiry slip

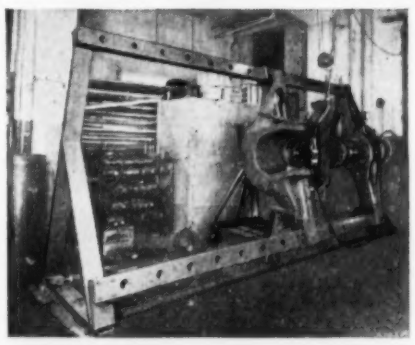
SMALL NOISE METER indicates sound level accurately

Noise, sound and vibration are measured accurately with this type 410-B sound level meter. Compactness is achieved through use of subminiature tubes and components. Range is 34 to 140 decibels above standard ASA reference level of 0.0002 dynes per sq cm. Power is supplied by hearing aid type batteries which have operating life of about 50 hours. Optional accessories include carrying case, extension cables and vibration measuring equipment. Made by **Hermon Hosmer Scott, Inc.,** Dept. NED, 385 Putnam Ave., Cambridge 39, Mass.

For more details circle NED-7946 on enclosed inquiry slip

FOR FAST, EFFICIENT PRESSING BENDING, FORMING, STRAIGHTENING . . .

New Rodgers FORCING PRESSES



Rodgers 300 Ton, 75° Inclined, Stationary Forcing Press being used efficiently to press an armature shaft.

. . . Power Pump
Rodgers 2-cylinder Power Pump with remote control.

. . . With These Features

Separate Pumping Units—Choose from individual hand-operated or power-driven pumps. ***Remote Control of Power Pumps***—Operator can control press from any desired position. ***Removable Hydraulic Cylinder***—Cylinder is easily removed from head member. ***Individual Frame Units***—Tracks, tension bars, abutment member and head member are all separate units. ***Expertly Engineered and Constructed***—All units are made strong, durable and dependable.

. . . In These Types and Sizes

Rodgers Versatile Forcing Presses are available in portable or stationary models—horizontal, vertical, 75° or 90° inclined—100 to 600 tons—with hand-operated or power-driven pumps.

Send for New Catalog 315

Rodgers Hydraulic, Inc.

HYDRAULIC POWER EQUIPMENT

7425 WALKER ST., ST. LOUIS PARK, MINNEAPOLIS 16, MINN.

For more details circle NED-7947 on enclosed inquiry slip

Hammond OF KALAMAZOO

WIDE SWING Grinders

DESIGNED FOR CONTINUOUS HEAVY DUTY GRINDING . . .

WIDE SWING — up to 36" between wheels. **NEVER-KLOG EXHAUST GUARDS** — Plate Steel, not cast iron. **HEAVY DUTY** — Model WXS-5 shown weights 1140 lbs. net. **FOR 12", 14" and 18" WHEELS** — models with multi-V-belt drive also available.

Hammond Machinery Builders INC.

1623 DOUGLAS AVENUE • KALAMAZOO 54, MICHIGAN

For more details circle NED-7948 on enclosed inquiry slip

Get the ONE flexible coupling that gives you single chain simplicity plus divided rollers

ONLY Link-Belt "RC" Flexible Couplings give you both. Divided rollers of Precision Steel Roller Chain equalize load . . . maintain proper balance at high speeds . . . adjust to reasonable misalignment and end float. Single-chain width means simplicity and economy.

There's a Link-Belt Roller Chain Coupling for ratings from fractional to 1000 hp. For complete information, write for Folder 2363.

"RC" Couplings available in 30 sizes, 3/8 to 12 in. bore.

LINK-BELT

"RC" FLEXIBLE COUPLINGS

LINK-BELT COMPANY: Chicago 9, Indianapolis 6, Philadelphia 40, Atlanta, Houston 1, Minneapolis 5, San Francisco 24, Los Angeles 33, Seattle 4, Toronto 8, Springs (South Africa). Offices, Factory Branch Stores and Distributors in principal cities. 12,524

For more details circle NED-7949 on enclosed inquiry slip

You Need MODERN EQUIPMENT to Fight Soot ECONOMICALLY

GE AV1-F908 FURNACE CLEANER

This high vacuum, heavy-duty Furnace Cleaner is G-E engineered to do the job easily, quickly, economically. Weighs only 51 lbs. 1 full H.P. Readily converted into a powerful BLOWER. Moderately priced. Used regularly, it helps PAY FOR ITSELF in a single season.

GENERAL ELECTRIC

General Electric Company, Dept. 22-2626
1285 Boston Ave., Bridgeport 2, Conn.

Send me, without obligation, details on G-E Heavy-duty Furnace & Boiler cleaning equipment.

Name.....

Firm.....

Address.....

City..... Zone..... State.....

For more details circle NED-7950 on enclosed inquiry slip

IMPROVE YOUR PRODUCTS AT LOW COST

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Write for a copy of this information packed folder—D-72.

You can improve your products and equipment, give them corrosion resistance and minimize use of critical materials by designing your products around PERMACLAD. Get complete information today.

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STAINLESS CLAD STEEL

ALAN WOOD STEEL COMPANY
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125 Years of Iron and Steel Making Experience
Other Products:
A. W. ALGRIP Abrasive Floor Plate • A. W. SUPER-DIAMOND Floor Plate • Plates • Sheets • Strip • (Alloy and Special Grades)

For more details circle NED-7951 on enclosed inquiry slip

Read how to brighten Plant Interiors WITH JUST ONE COAT

New free book tells how to get better paint results at lower cost . . . how to buy and apply the right aluminum paints.

Alcoa does not make paint. We prepared this book so you can know about many improvements in aluminum paints; can buy the best paint for each job without lengthy specifications and tests; so you can apply paints best for long life and good appearance.

Free book is packed with maintenance painting tips, coverage tables, facts on right aluminum paints to use inside and out, on wood, metal and hot surfaces. For your free copy, attach the coupon to your letterhead and mail today.

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Paint Service Bureau, 1788K Gulf Bldg., Pittsburgh 19, Pa.
Please send me a free copy of: "Painting with Aluminum".
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I want to paint the following:_____

Look for this shield on aluminum paints made by many paint manufacturers using ALCOA PIGMENTS.
ALCOA ALBRON

For more details circle NED-7952 on enclosed inquiry slip

AIR DEHYDRATORS
desiccant can be reactivated

Water absorption capacity that matches operating cycle of pressurizing equipment in aircraft is feature of these air filter - dehydrators. Cartridges hold from 8 to 60 cu in. of desiccant. Located on inlet side of air compressor, dehydrator provides maximum adsorption with low resistance to passage of air. Filter pads and wire mesh screens remove air dust. Water indicating crystals are grade A, type IV, as per specification No. AN-D-6, and are visible through transparent tube. Colors coincide with attached color card at 0, 20, 40, and 60 per cent relative humidity. When color changes from blue to pink desiccant can be reactivated by heating. Made by **Lear, Inc.,** Romec Div., 1440 Abbe Rd., Elyria, O.

For more details circle NED-7953 on enclosed inquiry slip

OVERHEAD DOOR OPERATOR
adaptable for remote control

Sectional overhead doors weighing up to 800 lb and from 8 to 14 ft high can be opened and closed automatically by model CA-300 operator. Ten different types of 12-volt remote controls can be supplied to suit needs of installation. Actuators are Underwriters' Laboratories listed and are powered by 110-v single-phase 60-cycle motors. Door locks automatically in closed position and cannot be opened manually from outside. Made by **Robot Appliances, Inc.,** 13165 Prospect Ave., Dearborn, Mich.

For more details circle NED-7954 on enclosed inquiry slip

HOIST-BINDER
works on ratchet principle

Working on ratchet hoist principle, hoist-binder will take up or slack off load chain 20½ in. or more, depending on length of chain used in binder. If load settles in transit unit is easily tightened without releasing entire load to take new "grab." Full strokes perform rapid take-up; half strokes permit minute adjustments. Handle, which will not fly up under load and may be removed to prevent tampering with load or binder, is sole means for binding and slacking off. When it is out, load cannot be released. Also, handle will bend before binder can be overloaded beyond safe limits. Weighing 10 lb, hoist-binder will exert pull of 3000 lb. Made by **Coffing Hoist Co.,** 801 Walter St., Danville, Ill.

For more details circle NED-7955 on enclosed inquiry slip

RESISTS
VIOLENT TEMPERATURE CHANGES

This resistor survives temperature fluctuations over the widest range—even from 340 to - 55°C, repeatedly.

In Ward Leonard Vitrohm resistors, all components have *matched* thermal characteristics.

This is because the vitreous enamel coating and ceramic cores are formulated and *made* by Ward Leonard . . . wire drawn to Ward Leonard's specifications. They react uniformly to temperature changes.

Write for Vitrohm Resistor Catalog, Ward Leonard Electric Co., 51 South Street, Mount Vernon, N. Y. Offices in principal cities of U. S. and Canada.

WARD LEONARD ELECTRIC CO.
Result-Engineered Controls Since 1892
RESISTORS • RHEOSTATS • RELAYS • CONTROL DEVICES

For more details circle NED-7956 on enclosed inquiry slip

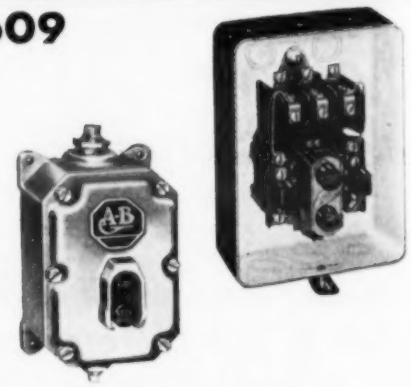
IMPROVED MODEL McCORD UNIT HEATER

The improved McCord Unit Heater incorporates every unit heater advancement that McCord engineers and the experience of thousands of users could suggest. The distinctive modern design with rounded corners combines improved appearance with greater strength and houses a heating unit that sets a new standard of heat transfer efficiency and quietness. The scientific design of the individual turbo spiral fin tube core provides even distribution of heated air at high velocity. The individual tubes prevent stresses due to unequal expansion. The entire heating unit is spring suspended and floats free in the casing eliminating rigid connections. Deep pitched fans provide high air delivery and quietness of operation.

This improved heater is a development of the experience gained from the thousands of McCord Unit Heaters in service. It combines good appearance with that inherent McCord quality of ruggedness and dependability that has made McCord the standard among many of the largest industrial users. You may also replace old leaking heaters using new McCord units and your old fan and motor. Write for new catalogs—Unit heaters and blast coil units. **McCord Corporation,** 2580 E. Grand Blvd., Detroit, Mich. —**Advt.**

For more details circle NED-7957 on enclosed inquiry slip

Bulletin 609 Manual Starters



- Silver alloy contacts need no maintenance
- Generous wiring space in white interior

An Allen-Bradley Bulletin 609 across-the-line starter saves maintenance time on any machine. Contacts never need cleaning, filing, or dressing—they're always ready for action. Strongly built for years and years of trouble-free operation. Thermal breakers provide reliable motor overload protection. Allen-Bradley Co., 1334 S. Second St., Milwaukee 4, Wisconsin.

ALLEN-BRADLEY
QUALITY
MOTOR CONTROL

For more details circle NED-7958 on enclosed inquiry slip

Labor Cost Reduced Amazingly in DRUM and BARREL HANDLING

SABIN One-Man BARREL TRUCK

Picking up barrels and drums, weighing as much as 800 lbs., is now an easy job for ONE MAN with a Sabin Type "L-3" barrel truck. And the cost of helpers is saved.

Operation is simple. You run truck up to container, hook on at top, and pull back on handle to pick up load. *Third Wheel Feature* ensures better balance and added safety.

WRITE FOR BULLETIN NO. 48-A

THE SABIN MACHINE CO.
6536 Carnegie Ave.
CLEVELAND 3, OHIO

ALSO TOTE PAN, BOX, CARBOY, KEG TRUCKS!

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GET THIS FREE BOOK OF FACTS ABOUT GLASS

Saves time in designing and specifying, suggests economical ways of using flat glass in place of other scarce, expensive materials.

Complete specifications, including thicknesses, sizes, weights and physical characteristics of all types of flat glass are tabulated in this condensed, easy-to-read booklet. The information it contains is ideal for users, designers and buyers of glass for all types of industrial applications—sheet glass, polished plate glass, *Electrapane** (electrical conducting glass), *Thermopane** insulating glass, *Tuf-flex** tempered plate glass, safety glass and *Vitrolite** opaque colored glass.

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TOLEDO 3, OHIO

For more details circle NED-7960 on enclosed inquiry slip

Seal Pipe Joints with KEY-TITE

Stops Needless Waste

Pipe joints sealed with Key-Tite cannot leak. Key-Tite is a perfect seal on all lines carrying water, gas, low-pressure steam, compressed air, etc. It contains no lead or substitutes and does not affect the taste or odor of potable liquids. Joints are easily opened, too, for it will not freeze in the joint. Stop losing money through leaky pipe joints...seal with Key-Tite.

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Try Key-Tite in Your Own Plant at Our Expense

KEY Company
KEY COMPANY
2601 McCasland Ave., East St. Louis, Ill.

For more details circle NED-7961 on enclosed inquiry slip

Wherever it's HOT specify Sicon

NEW IMPROVED SILICONE-BASE HEAT-RESISTANT FINISH

Protects Stewart Warner's New Saf-Aire Wall Furnace

Quality finish specifications for this heating unit called for a coating that would stand 500° and still retain its color and gloss—a temperature far above that incurred in normal operation. Ordinary heat resistant coatings failed. SICON *Ivory* and SICON *Beige* worked perfectly...just as SICON has solved so many other finish problems. *Write for dynamic proof of SICON'S amazing stability under heat! New Brochure now ready.*

Manufactured exclusively by
MIDLAND Industrial Finishes
Waukegan, Ill.
ENAMELS · SYNTHETICS · LACQUERS · VARNISHES

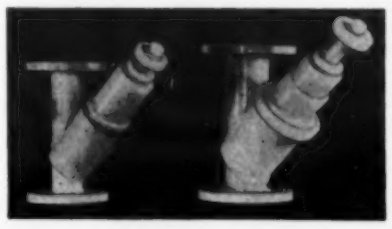
For more details circle NED-7962 on enclosed inquiry slip

KNIFE GRINDING ATTACHMENT
sharpens with cutterhead in machine

Saving in time can be realized by resharpening knife blades of Delta 8-in. jointer with cutterhead remaining in machine. To facilitate installation, jointer is made with table drilled and tapped to receive attachment. Proper grinding angle is obtained by placing pin through stop bar into end of head. Star wheel adjusts grinding wheel to any desired position and ball crank handle guides it across knives. Made by **Rockwell Mfg. Co.**, Delta Power Tool Div., 614 E. Vienna Ave., Milwaukee 1, Wis.

For more details circle NED-7963 on enclosed inquiry slip

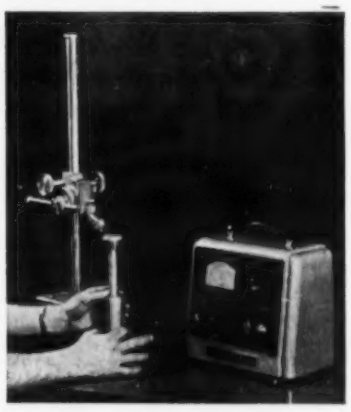
PLASTIC CHEMICAL VALVES
offered in 1 and 2-in. bore sizes



Weighing 1 and 3¼ lb respectively for 1 and 2-in. bore sizes, Agilene valves are resistant to such corrosive chemicals as hydrofluoric, sulphuric, nitric and hydrochloric acids at temperatures up to 170° F. They are made of polyethylene, except for packing rings of polyethylene-polyiso-butylene mixture. Valves are made with standard drilled flanges for incorporation into existing installations or for use in new pipe line assemblies. Made by **American Agile Corp.**, Dept. E, 5806 Hough Ave., Cleveland 3, O.

For more details circle NED-7964 on enclosed inquiry slip

HEIGHT INDICATOR
0-26-in. capacity electronic unit



For use in toolroom and for receiving, process and final inspection where accurate measurement is desired from surface plate reference is this electronic height indicator. Measurements can be taken above or below a surface without reversing clockwise movement of indicator hand. Electronic gage head has dual 1000/2000 to 1 amplification, smallest graduation of 0.0001-in., balance scale of plus or minus 0.0015 and 0.003-in., respectively. Vertical capacity is 0 to 26 in. and throat capacity (gaging point to edge of column rack) is 4½ to 11 in. Adjustment knob provides maximum adjustment of 0.010-in. of gaging stylus. Extension arm can be used radially with 345-degree range, while pickup head can be rotated 360 degrees. Made by **Sheffield Corp.**, 721 Springfield St., Dayton 1, O.

For more details circle NED-7965 on enclosed inquiry slip

For fast, accurate handling of many operations—safely!

If you have a problem of faster press room production, Federal Dial Feeds may be your answer. These rugged mechanical presses are showing the way to faster, safer, precision work to manufacturers everywhere. Carefully built of finest materials in six to 79 ton capacity. Automatic feeds and ejectors if desired.

A DIAL FEED can do any of these jobs for you!

Draw	Stamp
Pierce	Punch
Form	Crimp
Stake	Wire
Burnish	Broach
Assemble	Rivet
Mark	Burr

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FEDERAL PRESS CO.
506 Division St., Elkhart, Ind.

FEDERAL DIAL FEED **PRESSES**
26 YEARS OF QUALITY CONSTRUCTION

For more details circle NED-7966 on enclosed inquiry slip

A NEATER, STRONGER, FASTER CARTON CLOSURE - EVERY TIME!

Here's The Staple-Toothed Tiger again watching another customer save money in his shipping department with an INTERNATIONAL RETRACTABLE ANVIL STAPLE MACHINE! It Staples these *filled* cartons, *tops and bottoms* simultaneously at the unbelievable rate of 400 per hour . . . cutting shipping costs in half . . . reducing damage claims . . . and eliminating pilferage!

INTERNATIONAL STAPLE & MACHINE COMPANY
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For more details circle NED-7967 on enclosed inquiry slip

NEW! FOAMED LATEX COATED FABRICS

FOR THE FIRST TIME . . foamed latex and fabrics can be integrated to combine the functional cushioning action of foam with the tensile strength and versatility of cloth. A newly developed process embeds a wide variety of fabrics in thin gauges of foamed latex to form materials that can be fabricated into diversified end products ranging from industrial filters to shoe inserts and from instrument mountings to upholstery materials.

Durable as well as versatile, **ANDAL** combination materials can be die or deck cut, sewed, and cemented. Because the fabric-to-rubber embedding process does not seal the natural porosity of either component, the materials have "breathing" qualities. In addition, they can be washed or even boiled without damage to the foam.

ANDAL materials can be furnished in any desired color in widths from 45 to 60 inches on continuous rolls up to 75 yards. Foam gauges range from 1/8 to ¼ inch and can be supplied in varying densities to meet individual requirements.

220-AP

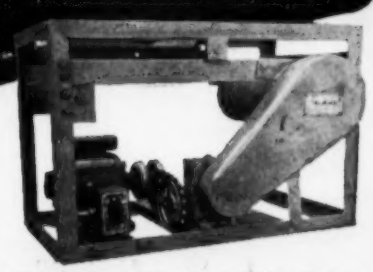
WRITE TODAY FOR SAMPLES

ANDREWS-ALDERFER PROCESSING CO., INC.
128-2 Ash St.
Akron 8, Ohio

For more details circle NED-7968 on enclosed inquiry slip

Make YOUR OWN
BELT CONVEYOR
and drive it with a
PAKAGE POWER UNIT

THE BEST POWER UNIT ON THE MARKET



If you plan to build your own belt conveyor using wood frames, tables or roller gravity—the annoying problem of calculating speeds, figuring proper size bearings, pulleys, shaft diameters, reducer torque, roller chain size, sprocket ratio—can be eliminated by using an IslAnd Pakage Power Unit . . . a scientifically engineered

SELF-CONTAINED BELT CONVEYOR DRIVE

Pakage Power Units are compact, portable and come completely assembled ready to be easily bolted to the chassis of the conveyor to be driven. Over 1000 Now in Regular Service. Get the facts on how these practical, multiple-use units can increase efficiency and lower costs.

FREE!

ISLAND EQUIPMENT CORP. Dept. NE10
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Long Island City 1, N. Y.

Sounds good to me. Send brochure on Pakage Power Units and various applications.

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ADDRESS _____
CITY _____ STATE _____

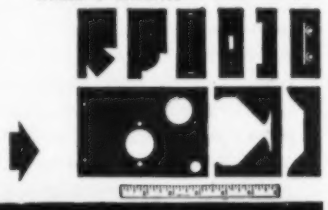
For more details circle NED-7969 on enclosed inquiry slip

A BLANKING DEPARTMENT FOR $120.00?

LESLIE MODEL A HAND PUNCH PRESS $120.00 F.O.B. CHICAGO

You can do short run punching and blanking jobs faster, easier on a low cost Leslie Model A Hand Punch Press.
Diagram below illustrates versatility of this Press—each blanking done with 1 stroke.
Write now for illustrated catalog and circular showing punches and dies available from stock.

- 15 ton capacity
- Patented Leaf Assembly provides accurate punch and die alignment.
- 6" throat depth permits reaching to center of 12" piece.
- Large Punch Plate and Bed permits blanking over big areas.
- Standard Punch and Die changes within 2 minutes.



Tool your jobs at low cost from our wide variety of standard punches and dies.

LESLIE WELDING CO.
2939 W. Carroll Ave., Chicago, Ill.

For more details circle NED-7970 on enclosed inquiry slip

CAN YOU USE 60,000 lbs. THRUST in a Portable Package?

IT'S THE NEW MANCO HYDRAULIC GUILLOTINE

- CUTS ROD, CHAIN, WIRE
- PUNCHES RIVETS, SWEDGES AND WHAT HAVE YOU?

Here is one of the most versatile tools in industry. The Guillotine's tremendous power (30 tons thrust) is being utilized to cut 1" steel rod and chain, 1¾" wire rope, as well as 3½" power cable. Other model Guillotines are available for punching holes or test slugs in steel plates and sheets and for squeezing cold rivets up to ⅝". Fast... only 2½ seconds for the cutting cycle. Easy to operate, compact, requires virtually no maintenance. Available with a variety of pump units. Write today.

Dept. NE-10
MANCO MFG. CO., Bradley, Illinois

WRITE FOR ILLUSTRATED BULLETIN

For more details circle NED-7971 on enclosed inquiry slip

Rasslin' with HIGH COSTS? SAVE on "MUSCLE JOBS" with T-J CYLINDERS

Toggle—a typical pushing operation.

Pulling—as shown in 1st class lever.

Lifting—a straight thrust movement.

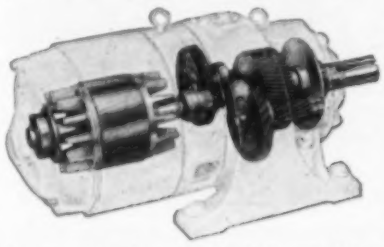
Air or hydraulic power—applied by T-J Cylinders—gets an amazing lot of tough jobs done for industry... *faster, more efficiently,* and at *lower cost!* Use T-J Cylinders for a wide range of pushing, pulling, lifting, clamping or control jobs... 100 lb. or 50,000 lb. Many standard sizes and styles... both cushioned and non-cushioned types... precision-built, dependable. Write... The Tomkins-Johnson Co., Jackson, Mich.

35 YEARS EXPERIENCE
TOMKINS-JOHNSON

For more details circle NED-7972 on enclosed inquiry slip

MOTORIZED SPEED REDUCER capacities range from 5 to 25 hp

Using splined herringbone pinion to divide load equally between two secondary pinions, type GL Synchrogear produces high torque at low speeds while occupying only a fraction of the space required for a conventional drive. Two secondary pinions drive the output gear. Available in ratings of 5 to 25 hp and with speeds from 30 to 84 rpm, this motorized drive features asbestos protected windings, normalized castings, solid Centricast rotors and Lubriflush lubrication. Made by **U. S. Electrical Motors, Inc.**, Dept. NED, 200 E. Slauson Ave., Los Angeles 54, Calif.



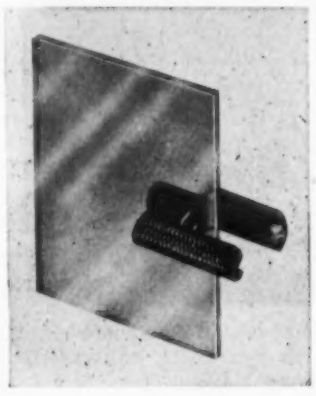
For more details circle NED-7973 on enclosed inquiry slip

AUTOMATIC RING PACKING fits shaft diameters from ⅝-in. up

Offered in varied compositions to suit such services as water, steam, oil, air, gas and vacuum, Uneepac automatic ring packing is furnished in sets of endless or split rings for shafts of ⅝-in. diameter and larger. Features include good sealing efficiency in minimum packing depth, elimination of header or follower rings and design which centers each ring on preceding ring. Positive seal is assured because each lip is exposed to fluid pressure. Because gland pressure is not needed, friction and wear are minimized. Made by **Johns-Manville Corp.**, Dept. NED-P2, 22 E. 40th St., New York 16, N. Y.

For more details circle NED-7974 on enclosed inquiry slip

EQUIPMENT DOOR LATCH for sheet metal doors and panels



Readily attached to sheet metal doors and panels, this Southco door latch consists of two brightly plated parts which fit together through a single hole drilled in panel. It is attached by twisting or flattening two prongs which join handle and pawl. Illustrated is hand-operated model with protruding handle. Also available is screwdriver operated style which fits flush. It can be used on appliances, control boxes, cabinets, machinery and other equipment. It locks and unlocks with a quarter-turn. Made by **South Chester Corp.**, Southco Div., 1400 Finance Bldg., Philadelphia 2, Pa.

For more details circle NED-7975 on enclosed inquiry slip

SPEED UP SMALL PARTS ASSEMBLY

Parts feed automatically toward front—end reaching and fumbling.
Bins taper toward front to form convenient semicircle—keep all bins within easy reach.
Stacking, locking construction for rigid set-ups, easily changed when necessary.
All-welded construction. Smooth, folded edges.
New-design, adjustable hoppers provide increased capacity and permit regulated flow of parts according to sizes and weights.
Two-sizes—tapered or straight sides.

IMMEDIATE DELIVERY
Manufactured and sold in Canada exclusively by Wickware-Stackbin, Ltd., Ottawa
Write Stackbin Corp., 1081 Main Street, Pawtucket, R. I.

STACKBIN SYSTEM
"Stacked and Still Accessible"

For more details circle NED-7976 on enclosed inquiry slip

FOR YOUR PANEL DIALCO

A NOVEL and UNIQUE CIRCUIT INDICATOR

DESIGNED FOR NE-51 NEON LAMP
For 110 or 220 volt circuits
The required resistor is an integral part of this assembly —"built-in."
RUGGED DEPENDABLE LOW IN COST

PATENTED: No. 2,421,321; Cat. No. 521308-997

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Write on your company letterhead. We will act at once. No charge, of course.

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Among our thousands of Pilot Light Assemblies there is one which will fit your special conditions. Many are especially made and approved for military use. We pride ourselves on prompt deliveries—any quantity.

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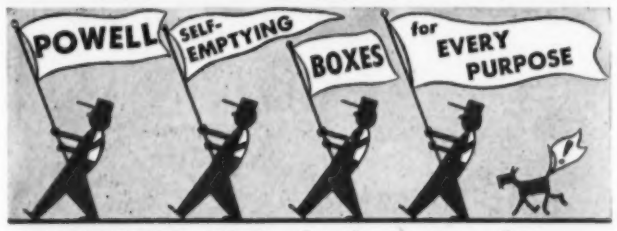
The DIAL LIGHT COMPANY of AMERICA
900 BROADWAY, NEW YORK 3, N. Y. SPRING 7-1300

For more details circle NED-7977 on enclosed inquiry slip



POWELL All Steel Job-Designed Dump Boxes or Roll-Overs Cut Handling 40-50%

If your product lends itself to mass handling a system of roll over or dump style boxes will cut your costs as much as 50 percent.

Powell makes a complete line of standard and Job-Designed roll over and dump boxes. For further data or estimates contact your nearest Powell representative or write direct.

Faster delivery of your materials handling needs is assured if you can furnish either a government D. O. number or the steel.

Send inquiries to Dept. 5101

THE POWELL PRESSED STEEL CO. • Hubbard, Ohio
ORIGINATORS OF COLD FORMED ALL STEEL HANDLING EQUIPMENT
(In Greater Youngstown)

For more details circle NED-7978 on enclosed inquiry slip

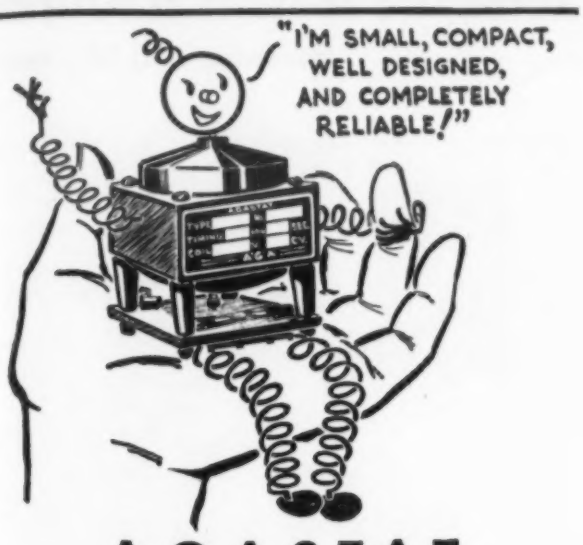
POWERFUL Fans and Blowers

AND *Your Hartzell Field Office*
PUTS HARTZELL ENGINEERING RIGHT IN YOUR BACK YARD!

If you foresee an air-moving problem for the future (any kind of an air-moving problem), call your nearby Hartzell man in *now*. A fully experienced direct factory representative will call on you promptly — ready to work with you, make recommendations and quote costs. If you don't know your nearest Hartzell office, drop us a line. There's a Hartzell representative near you and he's there to help you get *results*.

HARTZELL PROPELLER FAN CO.
DEPT. G DIV. OF CASTLE HILLS CORP. PIQUA, OHIO
engineering representatives in principal cities

For more details circle NED-7979 on enclosed inquiry slip



AGASTAT
TIME DELAY RELAY

Solenoid actuated—pneumatically timed. For AC and DC service. A special diaphragm and cap encase the head, providing an enclosed, dustproof timing chamber in which the air used for timing is recirculated. Low cost with dependability.

A·C·A AIRPORT LIGHTING · A·C·A STIMSONITE REFLECTORS · A·C·A MARINE LIGHTING EQUIPMENT · A·C·A AGASTAT TIME DELAY RELAYS

AMERICAN GAS ACCUMULATOR COMPANY
1027 NEWARK AVENUE • ELIZABETH 3, N. J.

For more details circle NED-7980 on enclosed inquiry slip

TONG TEST AMMETER

There is no other instrument like a Tong Test—it measures both A.C. and D.C. Readings are made instantly and accurately.

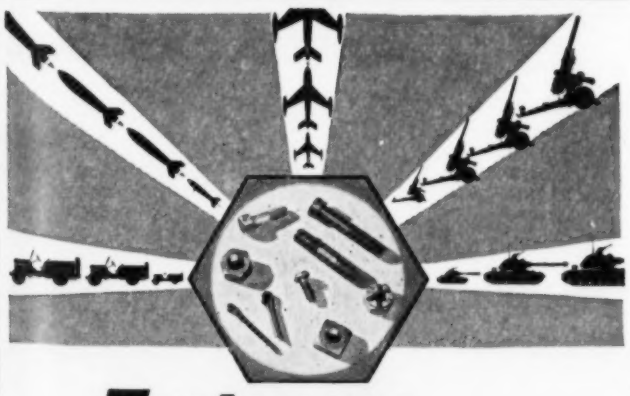
These outstanding features are yours when you use a Tong Test Ammeter:

- No breaking of circuit
- Operated with one hand
- Safe and convenient to operate
- Light weight—low price
- Scale ranges up to 1000 Amperes
- Voltage attachment available
- Five types to accommodate cables up to 3⅞", bus bars up to 4½" x ½"

Write for Tong Test Bulletin ND-400

COLUMBIA ELECTRIC MFG. CO.
4525 Hamilton Ave., Cleveland 14, Ohio

For more details circle NED-7981 on enclosed inquiry slip



Fasteners

... for our "First Lines" of Defense!

Before the men of our Army, Navy and Air Forces can go into action, the Production Lines of the country must supply the "tools" for the job.

Lamson & Sessions manufactures fasteners which play a vital part in keeping these "first lines" rolling. For practically every finished product requires bolts, nuts, screws, cotters, etc. In fact, over 2% OF THE STEEL PRODUCED IS USED TO FASTEN THE REST TOGETHER.

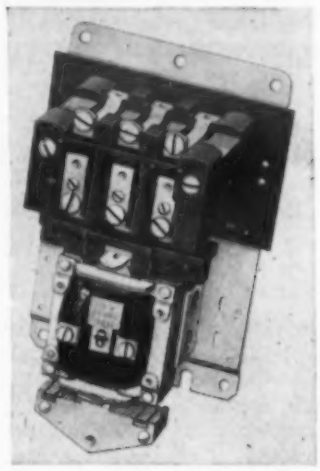
You who run the production "first lines of defense" are welcome to consult Lamson anytime on fastener problems.

The home of "quality controlled" fasteners — Lamson & Sessions

The LAMSON & SESSIONS Co. • General Offices: 1971 West 85th Street • Cleveland 2, Ohio
Plants at Cleveland and Kent, Ohio • Birmingham • Chicago

For more details circle NED-7982 on enclosed inquiry slip

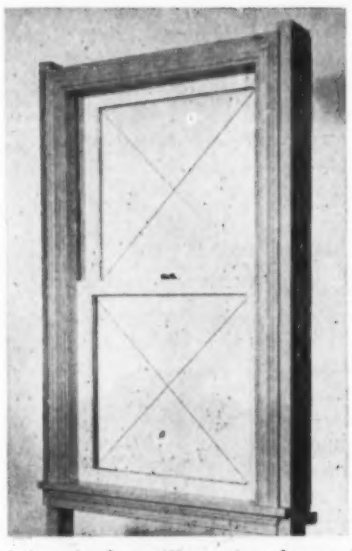
SOLENOID CONTACTORS
of multipole unit construction



Designed for both load and control circuit use in controllers for machine tools, refrigeration and air conditioning equipment, size O ac solenoid contactors are of multipole unit type. Double-break silver contacts easily converted to normally-open normally-closed type, alternating or direct current power plants and complete accessibility of parts are features. Contactors are available with power plants for 115 or 230-v dc operation. Mounting plate dimensions are same as alternating current types. Coils are interchangeable with those on size 1 alternating current solenoid contactors. Maximum ratings are 2 hp, 440-550-v, three-phase 60-cycle, and open 8-hr ampere rating is 15. Standard coils are furnished for 110, 220, 440 and 550-v operation on 25, 50 or 60 cycles. Made by **Ward Leonard Electric Co.**, 51 South St., Mt. Vernon, N. Y.

For more details circle NED-7983 on enclosed inquiry slip

SHATTER-RESISTANT WINDOW
minimizes effects of explosions by using "folding" glass panes

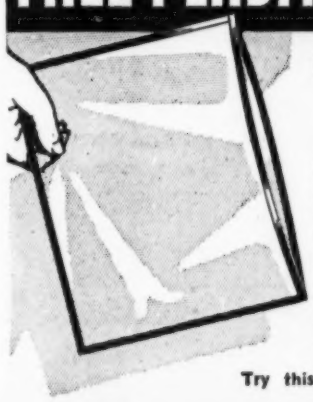


Designed to minimize effects of explosive forces, Flexseal Bomb Window uses a glass-plastic laminate that virtually eliminates dangers of flying glass. Window resists normal atmospheric pressures, but when these are exceeded by bomb blast or pressure wave, window will open automatically by folding about its edges. This action releases the pressure, preventing window frame and glass from being blown in.

Window consists of three layers laminated into single unit: outer layer is sheet of glass, middle layer a partially segemented sheet of polyvinyl butyral plastic, while inner layer consists of four triangularly shaped pieces of glass, central edges of which register with segmented edges of plastic layer. Plastic layer extends beyond glass and is fastened to window frame to serve as hinges. After explosion, four pieces can be returned to position and retained there by adhesive tape, putty, chewing gum or fastener. Made by **Pittsburgh Plate Glass Co.**, Dept. NED, 632 Duquesne Way, Pittsburgh 22, Pa.

For more details circle NED-7984 on enclosed inquiry slip

FREE PLASTIC ENVELOPE



Factory Experience Proves It Reduces Errors . . . Saves Work Speeds Up Production

Send for this free Kleer-Vu Plastic Envelope today and test it in your own plant. See how production records, job orders, blueprints, charts, graphs, etc., stay clear and clean always. No doubts, no errors, no wasted time because of blurred, grease-covered figures. No "make-overs" on vital war jobs. Work gets done quickly, efficiently. Ideal for much handled office forms, too. You can use Kleer-Vu Plastic Envelopes profitably in every phase of business.

Try this style FREE . . . write today

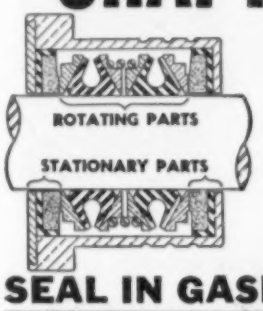
SPECIAL INTRODUCTORY OFFER!

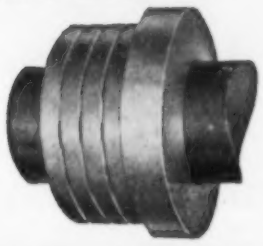
For a limited time only, 50 KV envelopes, (any style shown here), for $10. You save 33 1/3%. Money back in ten days if not satisfied.

AMERICAN KLEER-VU PLASTICS, INC.
57 Thames St. Brooklyn 6, N. Y.

For more details circle NED-7985 on enclosed inquiry slip

Eliminate Shaft Leakage with SYNTRON
SHAFT SEALS





SEAL IN GASES AND LIQUIDS

Self-contained, self-lubricating, easy-to-install units that provide fully automatic sealing action . . on pumps, compressors, engines, turbines, mixers, propeller shafts, etc.

Standard seals eliminate leakage of air, water, gases, petroleum products, etc., and withstand temperatures from 10°F. to 200°F. and pressures to 250 psi. Special seals for corrosive and abrasive liquids.

SYNTRON CO.
405 Lexington Ave. Homer City, Pa.

For more details circle NED-7986 on enclosed inquiry slip

More time for creative drafting!

Kodagraph Autopositive Paper has helped the Cleveland Crane and Engineering Company turn hours of costly retracing time into hours of creative drafting time.

Here are two typical examples which may suggest savings in your work.

Time saved . . . when drawings must be changed. Instead of making a new drawing—which in many cases would be 85% retracing—Cleveland Crane reproduces the original on low-cost Kodagraph Autopositive Paper. Then the draftsman eradicates the unwanted detail from this positive photographic intermediate . . . and substitutes the new design. Thus, a brand-new "original" is prepared in a fraction of the usual time.

Time saved . . . when drawings must be combined. Often the designs of several vendor-products must be included in a Cleveland Crane drawing. *It used to be a tedious retracing problem* . . . but now, the vendors' prints, which are often opaque, are reproduced on a sheet of Autopositive. Exposure . . . is in a standard print-making machine (above); processing . . . is in standard photographic solutions—a room light operation all the way. The result is a sparkling, *positive* intermediate—*obtained in one step*—dense photographic black lines on an evenly translucent, white paper base. To this, the draftsman simply adds supplementary detail . . . and the job is completed hours—even days—ahead of the old schedule.

Learn other ways revolutionary Kodagraph Autopositive Paper can help you. *Write today* for a free copy of the new illustrated booklet, "Modern Drawing and Document Reproduction."

EASTMAN KODAK COMPANY
Industrial Photographic Division
Rochester 4, N. Y.

Kodak

For more details circle NED-7987 on enclosed inquiry slip

50-Ton Contour-Former Employs Giant NOPAK Cylinder

Built by the Cyril Bath Co., Cleveland O., this powerful machine is used to shape curved aluminum airplane fuselage parts. A NOPAK Model "A" 10" x 80" Hydraulic Cylinder . . . operating at 1500 P.S.I. . . . works in conjunction with the forming die, mounted on a gear-driven turntable, to stretch-form an infinite number of curved structurals . . . with 700 different dies now in use.

Very likely the efficiency of machines you build or use can be stepped up substantially through the correct use of NOPAK Valves and Cylinders.

GALLAND-HENNING MFG. CO., 2755 S. 31st Street, Milwaukee 46, Wis.

Refer to Sweet's File for Product Designers or write for Bulletin SW-1

NOPAK VALVES AND CYLINDERS
DESIGNED for AIR and HYDRAULIC SERVICE
A 5984-1/9

For more details circle NED-7988 on enclosed inquiry slip

NEW JACK LOCATES ON ANCHOR BOLT

Empco JACK STYLE JS

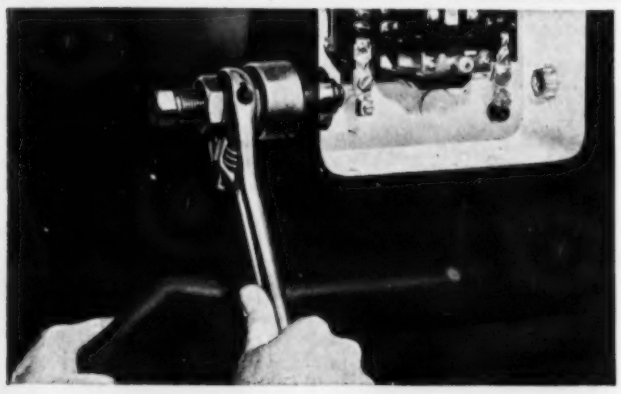
- SELF-ALIGNS TO UNEVEN FLOOR
- EASILY LIFTS 8,000 LBS.
- SIMPLY TURN ADJUSTING NUT TO RAISE OR LOWER MACHINE
- VI-SORB MOUNTING PADS ABSORB VIBRATION

Where anchor bolts are used, this new Empco Jack Style JS will save considerable time in setting and keeping equipment level.
Tested to support 20 tons and lift 8,000 lbs., this Empco Jack is the answer to any machine installations. Anchor bolt hole through the jack assembly allows clearance for ¾" diameter bolt. This permits the Empco Style JS Jack to be used at the *precise spot* where equipment was designed to be best supported.
Available in three sizes: 1¾", 2", and 3" (minimum heights) with VI-SORB mounting pads as optional equipment.
Write for specifications and prices of complete line of Empco Leveling Jacks.

EMPCO PRODUCTS

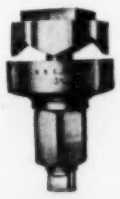
THE ENTERPRISE MACHINE PARTS CORPORATION
2727 JEROME AVENUE • DETROIT 12, MICHIGAN

For more details circle NED-7989 on enclosed inquiry slip



Accurate "clean" openings for conduit easily made in 1½ minutes or less

Speed conduit installations with GREENLEE Knockout Punches and Cutters. Eliminate time-wasting drilling and filing to enlarge holes. Do the job in 1½ minutes or less with these GREENLEE tools that cut smooth holes up to 4" to accommodate conduit in sizes ranging from ½ to 3½". Do the job neater, faster, easier, this way.



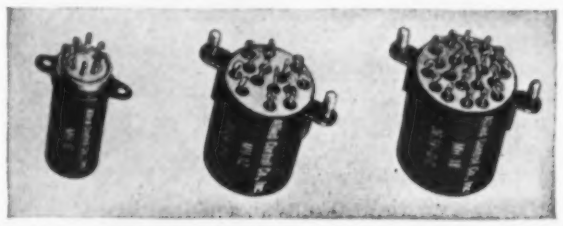
TOOLS FOR CRAFTSMEN GREENLEE

GET FACTS TODAY on all four types of Greenlee Knockout Punches and Cutters and HydraRam Hydraulic Knockout Punch Driver. Greenlee Tool Co., 1950 Herbert Ave., Rockford, Illinois

For more details circle NED-7990 on enclosed inquiry slip

SUBMINIATURE RELAYS
meet military specifications

Developed for aircraft and airborne equipment, type MH subminiature relays are available in two, four and six pole double-throw styles and meet requirements of USAF



specification MIL-R-5757. Their respective diameters are ⅝, 1-1/32 and 1-3/16 in. with seated height of 1½ in. Operating range of standard type is −55 to 85° C and of high temperature type is −65 to 200° C. They will withstand vibration of 10 g and shock of 30 g of 10-millisecond duration. Hermetically sealed for operation to 70,000-ft elevation, they have contacts rated 2 amp at 28 v dc. Made by **Allied Control Co.**, East End Ave. at 79th St., New York 21, N. Y.

For more details circle NED-7991 on enclosed inquiry slip

TWIN HOPPER
for Nestier handling system

Retaining nesting and tiering features of original twin hopper, this larger model 220 has over twice the capacity. Smaller model will be continued. Made of 16-gage steel, twin hopper can be used to supply small parts to production line employees, as well as seeing use for interplant parts handling. It requires only one-sixth the space for return of empties as when loaded. When open at top, hopper can be used by two operators working side by side. When tiered, it is loaded from one end and parts withdrawn from other. Each unit measures 22⅝ x 7¾ x 12⅛ in. Made by **Charles William Doepke Mfg. Co.**, Dept. NED, Rossmoyne, O.

For more details circle NED-7992 on enclosed inquiry slip

VERTICAL MOTORS
of solid shaft capacitor type

Standardized mounting dimensions and quiet operation are features of Tri-Clad vertical solid shaft capacitor motors, available in ratings from ¾ to 5 hp. Motors are for application on jet pumps where severe climatic conditions are not encountered. Dimensions of type P base, machined to NEMA standards, are same as those of polyphase motors of same size. Offered as accessory equipment with motors of 2 hp or less is automatic thermal protective device which disconnects motor from line when limiting temperature is reached because of overload, high ambient temperature or inability to start. Built with squirrel cage rotors, motors are quiet in operation and cause no radio interference.

Made by **General Electric Co.**, Schenectady 5, N. Y.

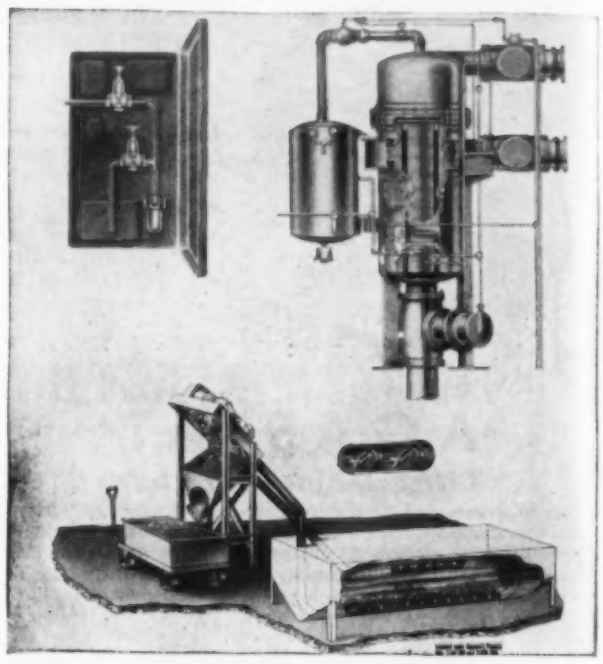
For more details circle NED-7993 on enclosed inquiry slip

MERRILL
MATERIALS HANDLING DEVICES

MERRILL BROTHERS
56-13 ARNOLD AVE., MASPETH, N. Y.

For more details circle NED-7994 on enclosed inquiry slip

AUTOMATIC COOLANT CLARIFIER FOR ARG
increases tool life, improve prod

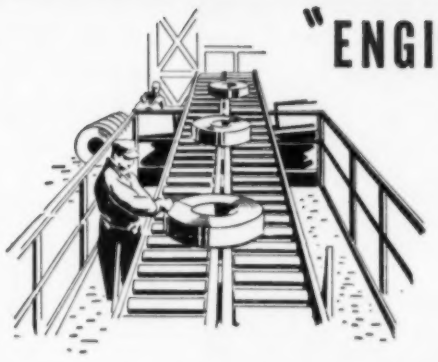


Newly designed Houdaille Automatic Clarifier System, which removes abrasives and other solid contaminants from machine tool coolants—transports waste to a disposal

For more details circle NED-[illegible] on en

Mathews Chain

"ENGINEERED T



• One of
of conve
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—Mathew
following

ROLLER CONVEYERS • LIVE ROLLER CONVEYERS • BELT CON
CONVEYERS • TROLLEY CONVEYERS • ROLLER SPIRAL
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MATHEWS
GENERA
MATHEWS CONVEYER COMPANY . . .
PACIFIC CO
MATHEWS CONVEYER COMPANY WES
CANADIAN
MATHEWS CONVEYER COMPANY, LTD
Engineering Offices or Sales Agencies in principal

For more details circle NED-[illegible] on en

"HERE'S INFORMATION YOU CAN U

send for
UNION METAL
Materials Handling Catalogs

Just sign and mail the coupon below, and you'll receive either or both of these up-to-the-minute catalogs. They're full of information that can help you simplify and save time and money on your materials handling jobs.

Catalog 77 gives you complete information on all the newest Union Metal developments in pallets, skids and boxes. Fully illustrated, showing the many types and possible combinations.

Catalog MH-807 gives you details about Union Metal steel shop boxes, illustrates typical standard and "special" types. There are many uses for these versatile shop boxes.

If you move, handle or store materials of practically any size or shape, these Union Metal catalogs can help you with time-and-money-saving ideas. Use the convenient coupon below or write The Union Metal Manufacturing Company, Canton 5, Ohio.

UNION METAL
Materials Handling Equipment

For more details circle NED-[illegible] on en

OR LARGE CENTRAL SYSTEMS
ove product finish, cuts rejects

point—and cleans its own filtering screens in automatically timed cycles, is announced by the Honan-Crane Corporation, Lebanon, Indiana.

Equipment, which removes particles as small as 5 to 10 microns, consists of multiple-screen clarifier (upper right), blowdown tank with conveyor (below), and an automatic control panel (upper left). Contamination, removed from clarifier screens by blowdown action, settles in V-bottomed tank and is automatically removed to disposal point by a tube-enclosed Houdaille chain conveyor built into the tank. Liquid from blowdown tank is returned to clarifier so that little or none is lost.

System is specifically designed for plant operations involving large numbers of cutting and grinding tools served by a central coolant system, and may be used for clarification of mineral oil or soluble oil coolants. By keeping coolant free from abrasives and contamination, the Houdaille Automatic Clarifier System increases tool life, provides better product finish with fewer rejects, and extends coolant life substantially. Eliminates need for individual coolant pumps and motors on machine tools. Eliminates labor required to clean individual sumps and lines.

Houdaille Automatic Clarifier Systems are built to provide flow rates up to 1000 GPM; the installation of several units in a central system allows an unlimited volume of liquid to be handled. Made by **Honan-Crane Corp.**, subsidiary of **Houdaille-Hershey Corp.**, 405 Wabash Ave., Lebanon, Indiana. *Advt.*

tem, rom osal

le NED-s on enclosed inquiry slip ▲

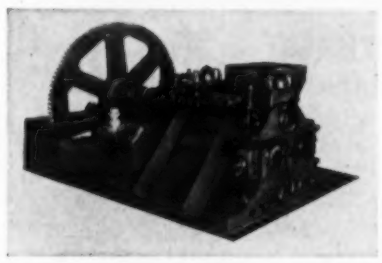
PUNCH PRESS LOADER
automatic unit safely speeds up redrawing

Punch press speeds on redraw operations can be increased from 10 to 60 per cent over hand feeding, with operator safely removed from job, by Lodac press feeder. Mechanical fingers pick up parts after first draw and feed one or more consecutive redraw presses at speeds up to 1200 parts per hour. Similar fingers remove parts from press to feed them on another conveyor to feed further press operations. Slow and hazardous hand feeding is eliminated by automatic feeder.

Operation cycle is set by speed adjustment of feeder. At proper point after loading, press is tripped by feeder, with either electric or air triggering. Safety circuit stops feeder and press if part is not removed from die. If parts are not being loaded, "memory" circuit operates press and feeder, starting press and feeder at point of cycle where last interrupted. Mechanical fingers are designed for parts to be handled and are held in special chucks. Made by **Magnaflux Corp.**, 5916 Northwest Highway, Chicago 31, Ill.

▲ For more details circle **NED-7998** on enclosed inquiry slip ▲

FIBER ROLL PRESS
prepares and dewaters many fibrous materials

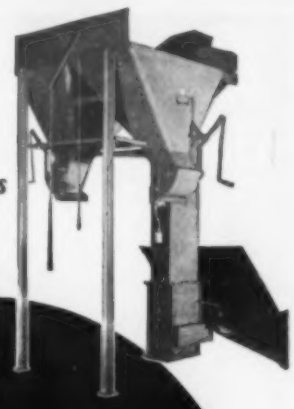


Fibrous materials such as straw, cooked flax, bark, wood chips, knots and screenings, jute and sugar cane bagasse are pressed and dewatered with this large roll press. Material is conveyed to top hopper and fed into three circumferentially grooved rolls which are arranged horizontally in triangular relation to each other. Grooves mesh to provide squeezing and flattening pressures on fiber, cutting it into small pieces and draining the expressed liquors into trough for disposal or reuse in system. Guide bar and turnplate sends material through machine for second processing, then discharges it from back roll down a chute. From there it can be conveyed to further processing equipment.

To assure maximum water extraction, top roll is mounted in floating bearings to which variable hydraulic pressures up to 120 tons can be applied depending upon nature of material. Rolls are revolved by gear reducer driven by 75 hp electric motor. Made by **Fulton Iron Works Co.**, Dept. N, 1259 Delaware Ave., St. Louis 14, Mo.

▲ For more details circle **NED-7999** on enclosed inquiry slip ▲

the HANDY SANDY gives you 7 advantages THAT MEAN LOWER COST SAND HANDLING FOR YOU



fits any foundry

1. Puts the Sand Pile Overhead
2. Eliminates Shoveling and Waste Motions for the Molder
3. Increases Molders' Output
4. Savings From First Unit Pay for the Next Unit
5. Improves Condition of Sand
6. Takes Little Space
7. Low Cost — Simple to Install

write for bulletin No. 205

NEWAYGO ENGINEERING COMPANY NEWAYGO, MICHIGAN

▲ For more details circle **NED-8001** on enclosed inquiry slip ▲

JET QUICK ACTION

IN THE "NICK OF TIME"

Gebauer's TANNIC SPRAY

Reg. U.S. Pat. Off.

Your best first aid for minor burns. The more quickly a burn is treated the less likely it is to form painful, ugly blisters—to require further treatment—to cause the loss of precious man-hours.

Always ready for INSTANT use, Gebauer's TANNIC SPRAY is applied by the touch of a thumb, covering the painful area in jet-quick time with a cooling, soothing, healing solution of tannic acid that dries in seconds, leaving a thin, transparent coating that can eliminate the need of a bandage.

Employees like the way TANNIC SPRAY gives instant, sure relief—leaves them without awkward, hampering bandages. Employers like the rapid way it is applied—the time it saves in treatment—and later.

GEBAUER'S TANNIC SPRAY may be obtained at your surgical supply house—or write Dept. R.

THE GEBAUER CHEMICAL COMPANY
9410 St. Catherine Ave.,
Cleveland 10, Ohio.

▲ For more details circle **NED-8002** on enclosed inquiry slip ▲

hain Conveyers

ERED TO SERVE PRODUCTION"

• One of the many widely applied types of conveying equipment designed and built by Mathews Conveyer Company.

The complete line of Mathews designed—Mathews built Conveyers includes the following:

ERS • BELT CONVEYERS • WHEEL CONVEYERS • ELEVATING
ROLLER SPIRAL CONVEYERS • PORTABLE CONVEYERS
CONVEYING MACHINERY

EWS CONVEYERS
GENERAL OFFICES
COMPANY . . . . . ELLWOOD CITY, PENNSYLVANIA
PACIFIC COAST DIVISION
COMPANY WEST COAST . SAN CARLOS, CALIFORNIA
CANADIAN DIVISION
COMPANY, LTD. . . . . PORT HOPE, ONTARIO
ies in Principal American and Canadian Cities

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YOU CAN USE!"

The Union Metal Manufacturing Co., Canton, Ohio

The Union Metal Manufacturing Company
Canton 5, Ohio
Please send me a free copy of Catalog 77_____, Catalog MH-807_____. (Check one or both)
Name_____
Company_____
Address_____
City_____ Zone____ State_____

AL
uipment

circle NED-s on enclosed inquiry slip ▲

MARK-TIME "5400" BELL TIME SWITCH is first choice for ruggedness and versatility

first where quality counts

This Mark-Time Two-Purpose unit rings the bell with manufacturers of all types of electrical equipment and appliances.

The "5400" Time Switch turns an electrical device OFF after a pre-set time interval and simultaneously provides a clear warning bell. ON type unit available on special order.

Gives reliable, continuous service under the heaviest duty.

Wide variety of modern dials and knobs.

Write for further information and prices.

MARK-TIME 5400-SERIES BELL TIME SWITCH
U.L. approved for 20 ampere, 125 volt or 10 ampere, 250 volt, 1 HP operation, AC only. Timings available from 60 seconds to 5 hours.
Normally supplied for Center Stud mounting. Other mountings available upon request.

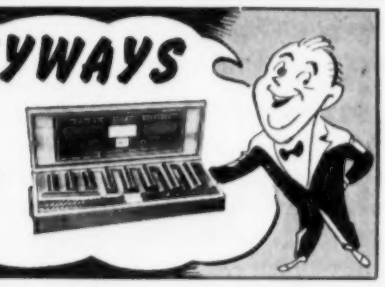
MARK-TIME

M. H. RHODES, INC.
HARTFORD, CONNECTICUT

In Canada send inquiries to: Ontario Hughes Owens Co. Ottawa, Ontario

▲ For more details circle **NED-8000** on enclosed inquiry slip ▲

Cut KEYWAYS for 1¢ each

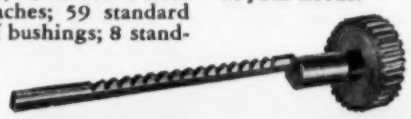


with du MONT *standard* KEYWAY BROACH KITS

Cut 'em any width from 1/16" to 1" in any bore from 1/4" to 3"—in gears, cutters, pulley hubs, collars, couplings, etc. Do the work in 60 seconds.

du Mont makes 21 standard sets; 23 standard sizes of broaches; 59 standard sizes of bushings; 8 standard sets of Metric keyways and broaches; plus a wide range of special production type guideless broaches.

There is a time and money saving du Mont Keyway Broach or Kit to fit your needs.



MAIL THE COUPON for the facts

The du MONT CORPORATION, Greenfield, Mass.

Please mail descriptive folder and price list D on *Minute Man Keyway Broaches and Kits.*

Name.....
Company.....
Address.....

▲ For more details circle **NED-8003** on enclosed inquiry slip ▲

Speed Production • Save Critical Materials

Producing quality welds on high tensile fabrication jobs is essential today. Rewelds cost time and money. That's why it will pay you to depend on ARCOS—leader in the low hydrogen electrode field.

You get trouble-free, uniform welding performance because low hydrogen electrodes get the same rigid quality controls developed for the very critical requirements of Stainless.

WELD WITH ARCOS

ARCOS CORPORATION
1500 South Fiftieth St., Phila. 43, Pa.

SPECIALISTS IN STAINLESS, LOW HYDROGEN AND NON-FERROUS ELECTRODES

For more details circle NED-8004 on enclosed inquiry slip

This Special Pittsburgh Brush*

CLEANS RED-HOT CASTINGS in 30 seconds

** An actual case history from the U. S. Pipe and Foundry Company, Birmingham, Alabama*

A PITTSBURGH brush provides the answer for U. S. Pipe and Foundry's problem of cleaning red-hot castings. This rugged brush works 40 hours a week, turning out thoroughly cleaned castings at the rate of one every 30 seconds . . . a speed record for any brush cleaning operation of this type.

LET PITTSBURGH ENGINEERS SOLVE YOUR BRUSH PROBLEMS

Pittsburgh's complete line of brushes of every type, for every purpose, will provide a practical, economical solution of any brush problem you might have. Drop us a line on your company letterhead for a copy of our new booklet that shows, through actual case histories, how Pittsburgh can help cut your brushing operation costs. Address: PITTSBURGH PLATE GLASS COMPANY, *Brush Div.*, Dept. M4, 3221 Frederick Ave., Baltimore 29, Md.

PITTSBURGH

Power Driven BRUSHES

BRUSHES • PAINT • GLASS • PLASTICS

PITTSBURGH PLATE GLASS COMPANY

For more details circle NED-8005 on enclosed inquiry slip

THREE-POSITION INDICATOR shows mechanical settings not accessible for inspection

Originally used to indicate aircraft landing gear position and report de-icing fluid level and cabin air pressure, remote-reading three-position indicator will report pressures in hydraulic or air circuits and check levels of oils, coolants, chemicals, or other liquids held in reservoirs. Device consists of circular card, rotated by two solenoids, which exhibits one of three printed symbols at round observation window. Solenoids can be actuated by float, pressure or contact switches in simple wiring circuit.

Indicator body is slightly larger than cigarette lighter, weighs about 2½ oz and is built to function under adverse physical conditions. Sealed brass case is dust-tight and will pass rigid salt-spray and immersion tests. Unit withstands temperatures from minus 85° to plus 158° F, and vibrations of 0.018 to 0.020-in. amplitude between 300 and 3000 cycles per minute, as well as 4-hour cyclic thermal shock tests. Made by **Riverside Metal Co.**, Keystone Bldg., Riverside 1, N. J.

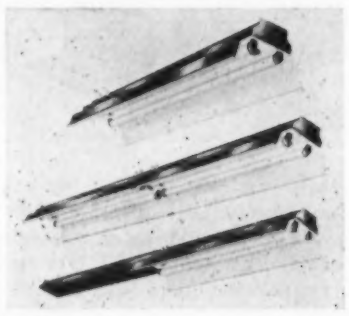
For more details circle NED-8006 on enclosed inquiry slip

HARD-SURFACING ELECTRODE

Strong, dense overlays can be applied to wear surfaces of carbon and alloy steels with EuteChrom 2X electrodes by alternating or direct current welding. Because this FrigidArc flux coated alloy deposits at low amperage, danger of distortion and stress creation is minimized. Overlay is resistant to wear, abrasion, impact and corrosion. Electrodes are available in 1/8, 5/32, 1/4, and 3/16-in. diameters. Made by **Eutectic Welding Alloys Corp.**, Dept. P, 172nd St. & Northern Blvd., Flushing 58, N. Y.

For more details circle NED-8007 on enclosed inquiry slip

FLUORESCENT FIXTURES developed for industrial plant use

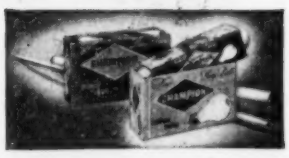


Economical high-efficiency lighting for industrial plants is afforded by Dynalite line, comprised of 82 job-rated fluorescent fixtures. Especially suited for plant and shop lighting are two and four lamp 40-watt medium bi-pin units. They are offered with instant or conventional starters in 4-ft, 8-ft tandem and 8-ft combination lengths for machine-spaced installations. Either baked enamel or RLM porcelain reflectors are 13 in. wide, and one-piece body channels are 20-gage steel. Furnished completely wired ready for line lead connections, units operate on 110-125-v 60-cycle ac. They can be chain, conduit and stem mounted individually or in continuous rows. Made by **Mitchell Mfg. Co.**, Dept. N-2, 2525 N. Clybourn Ave., Chicago 14, Ill.

For more details circle NED-8008 on enclosed inquiry slip

—A BETTER TOOL

- FOR BETTER SEEING
- FOR BETTER WORK
- FOR BETTER COMFORT
- FOR BETTER ECONOMY



Champion MEANS THE BEST IN LAMPS

CHAMPION LAMP WORKS
Lynn, Massachusetts
A DIVISION OF CONSOLIDATED ELECTRIC LAMP CO

For more details circle NED-8009 on enclosed inquiry slip

. Containers weighing *1/6* that of steel, only *1/2* as much as aluminum—and at no sacrifice of strength and durability! Give your workers *this* kind of container and you're going to *lower* handling costs, *reduce* worker accidents. Diamond Vulcanized Fibre Receptacles will not crack, splinter or peel. Smooth, hard surface avoids snags in delicate fabrics, yet has "elephant-hide" toughness to carry the heavy stuff All types available — boxes, barrels, cans, trucks, etc. Put a few in your plant, now, and discover what they can do. Send for descriptive booklet.

C-D DIAMOND FIBRE RECEPTACLES
CONTINENTAL-DIAMOND FIBRE CO., NEWARK 30, DEL.

For more details circle NED-8010 on enclosed inquiry slip

Here are the ANSWERS to your AC MOTOR STARTER QUESTIONS

What makes a GOOD Motor Starter?
• Dependability in operation . . . ruggedly built for hard usage . . . long life . . . requiring little attention . . . easy inspection and maintenance.

What makes the new CLARK Type "CY" different?
• An entirely new, advanced principle of arc interruption; combining strong, multi-turn magnetic blowouts and twin-break contacts.

How does this improve its operation?
• Constant forced rotation of the arc—moving continuously from a hot to a cold spot, minimizes burning or pitting of contacts.

How about maintenance?
• Longer contact life means less service. No filing, dressing or cleaning of contacts required. No tools necessary to inspect contacts. Contacts, coils and other components easily changed. The CLARK Type "CY" is the maintenance man's dream!

Is it rugged?
• Mill Type heavy-duty construction and design provide extra protection and dependable operation in severe service.

Any other advantages?
• Many—among them the ingenious design of the solid upper arc shield that prevents accumulation of hot gases between wiring terminals, minimizing phase-to-phase failures.

Let a CLARK application engineer show you what this new line of CLARK Type "CY" starters means to you in increased production and lower maintenance.

THE CLARK CONTROLLER CO.
ENGINEERED ELECTRICAL CONTROL • 1142 EAST 152ND STREET, CLEVELAND 10, OHIO

For more details circle NED-8011 on enclosed inquiry slip

TUF-STUF'S best proving ground is in the air!

It pays to specify TUF-STUF aluminum bronze alloys for parts that must stand up

Because they are both light and tough, TUF-STUF aluminum bronze alloys have proven invaluable in America's aircraft as valve-seat inserts, spark plug inserts, valve guides, gears and other vital parts.

If your product requires machined parts that are strong but light, resistant to corrosion, long wearing and resistant to oxidation even at high temperatures, then TUF-STUF is the right alloy for the job.

TUF-STUF alloys are furnished in the form of forgings, rods and screw machine parts. They fill Federal Specification QQ-B-666, Grade B, and several other variations. Because of the increased use and demand for both aluminum and copper, jobs carrying a Defense Order Number are receiving first consideration. 58

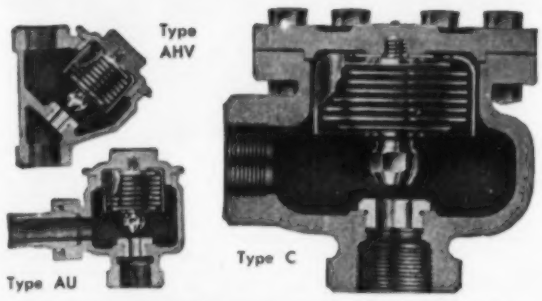
MUELLER BRASS CO., PORT HURON 26, MICH.

For more details circle NED-8012 on enclosed inquiry slip

Nicholson Traps Help

CUT STEAM COST $500,000 A YEAR

At one of the nation's large processing plants a campaign to promote economical steam use by improving heat transfer efficiency has resulted in a yearly saving of $500,000. Credit for a fair portion of this is given to improved steam trapping, which resulted from the installation of Nicholson thermostatic traps. To see why an increasing number of leading plants are standardizing on Nicholsons for positive drainage and faster heat transfer, send for BULLETIN 450.



W. H. NICHOLSON & CO. 152 OREGON STREET WILKES - BARRE, PA.

Sales and Engineering Offices in 55 Principal Cities

For more details circle NED-8013 on enclosed inquiry slip

For High Production on Small Parts

LOW COST AIR OPERATED

Han-D-Press

designed to meet high production schedules on

- ASSEMBLING
- STAKING
- RIVETING
- PUNCHING
- MARKING
- PRESSING

Bulletin No. 251 sent on request. Gives full description with engineering data.

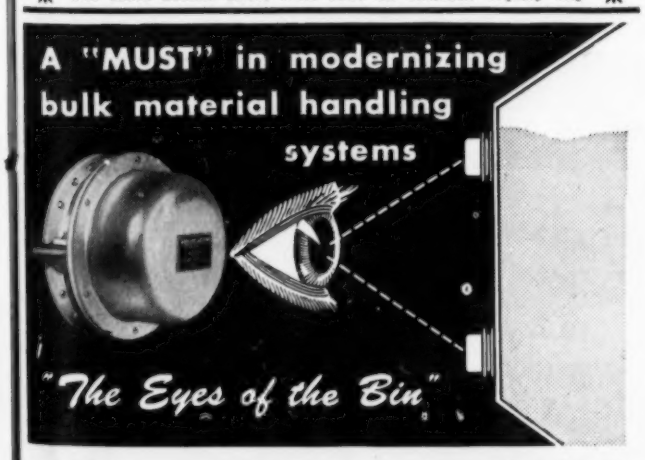
Replace old hand-operated arbor presses with Hannifin's versatile "Han-D-Press"! Handle light production operations . . . faster . . . and at lower cost! Electric control. Hand or foot operated. Two popular sizes—½ ton and 1 ton.

HANNIFIN

Hannifin Corporation • 1127 S. Kilbourn Ave., Chicago 24, Ill.

For more details circle NED-8014 on enclosed inquiry slip

A "MUST" in modernizing bulk material handling systems



"The Eyes of the Bin"

BIN-DICATOR BIN-LEVEL INDICATOR

BIN-DICATOR "keeps an eye" on levels of bulk materials in silos, hoppers, bins, chutes and automatically reports to central control point. Prevents over-filling; prevents overfeed and underfeed to conveyors and filling equipment; prevents delays and waste. Low cost, easy to install, simplest operation. Widely used.

BIN-FLO Aerator Units keep dry, finely ground materials moving in bins, hoppers, chutes; prevent packing and bridging.

NEW 20-PAGE BOOK FREE

THE BIN-DICATOR CO.
13946-A Kercheval • Detroit 15, Mich.

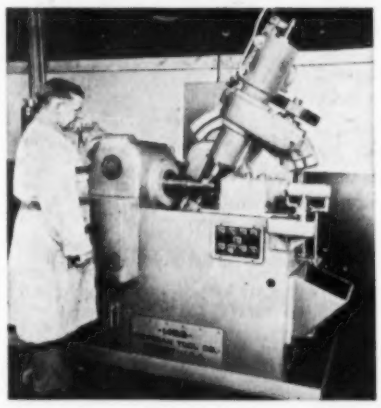
For more details circle NED-8015 on enclosed inquiry slip

SWING SAW FEED air-operated unit is automatic

Swing cut-off saws used to cut wood, plastic or metal stock can now employ attached air operated unit which automatically swings cutter forward at predetermined speed and distance, then returns it to position behind guide rail clearing table for quick unloading and reloading. Controlled by lever or button, movement is limited to one cycle with each press of button. Operator can devote full attention to handling stock on one machine, or in case of cutting metals, several machines. Unit comes completely assembled and ready to install, with drilling of four holes, on any Heston & Anderson swing cut-off saws. New saws may be ordered with unit built in. Made by **St. Paul Foundry & Mfg. Co.**, Heston & Anderson Div., 607 Kirkwood Ave., Fairfield, Iowa.

For more details circle NED-8016 on enclosed inquiry slip

GEAR-HOBBER handles gears with up to 8-in. diameter and 4¾-in. face width



Despite high output rate one man can run two or more of these high-speed gear hobbing machines. Weighing 21,000 lb and requiring 84 x 84-in. floor space, hobber is capable of turning out two 3⅛-in. diameter, 9-pitch, 2-in. total face width, 22-tooth helical gears in 58 seconds using high speed hobs. Work is horizontally mounted either manually or through automatic loading and unloading device.

Operator merely places work in or on head-stock spindle and pushes button. Machine cycle includes hydraulic advance and retracting tailstock, and turning on and shutting off of coolant flow. Either climb or conventional hobbing can be used, as desired.

Infinitely variable rate of feed is adjusted by dials on two valves, one for plunge-cut feed, and one for traverse feed. Fine pitch screw adjustments on large screws provide accurate settings of hob spindle angle and depth of cut. Solenoid controlled oil-air-mist lubricator provides lubrication only while machine is running and at a consumption of 2 oz of oil in 8 hours. Made by **Michigan Tool Co.**, 7204 E. McNichols Rd., Detroit 12, Mich.

For more details circle NED-8017 on enclosed inquiry slip

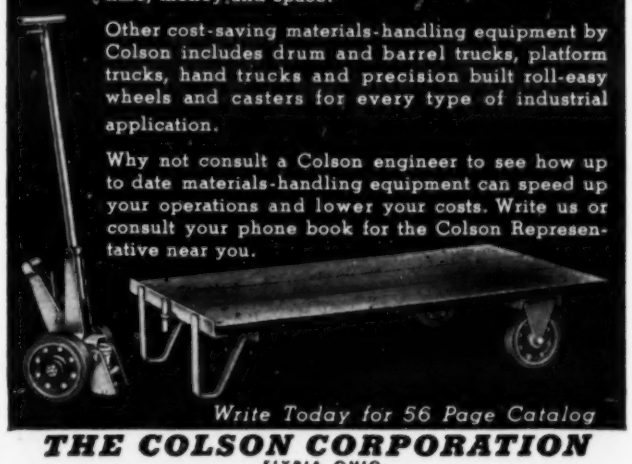
In Materials-Handling the Colson® LIFT-JACK System

Lets 1 man do the work of 2

Through production, in and out of storage, on and off freight cars or trucks, Colson Lift-Jacks with wood or steel semi-live skids can easily double the efficiency of conventional hand trucks. You save time, money and space.

Other cost-saving materials-handling equipment by Colson includes drum and barrel trucks, platform trucks, hand trucks and precision built roll-easy wheels and casters for every type of industrial application.

Why not consult a Colson engineer to see how up to date materials-handling equipment can speed up your operations and lower your costs. Write us or consult your phone book for the Colson Representative near you.



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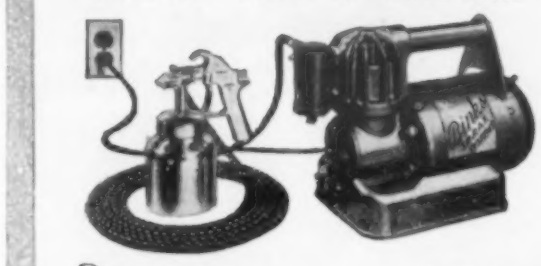
THE COLSON CORPORATION
ELYRIA, OHIO

CASTERS • • • • LIFT-JACK SYSTEMS • • • • INDUSTRIAL TRUCKS

For more details circle NED-8018 on enclosed inquiry slip

BINKS DP* SPRAY PAINTING UNIT



it's portable it's Binks

Giant BUY among small painting units

Binks Model DP portable spray outfit saves time and labor on maintenance painting, on touch-up and repair work and even on production finishing in small plants. Produces a steady pulseless flow of air at 40 psi—in ample volume for fast, quality finishing. It's rugged—stands up under constant use. It's available with 8 different gun, hose and cup combinations—for electric or gasoline operation.

*DP means Direct-drive piston

Write today for Bulletin 601 for full details.

Binks MANUFACTURING COMPANY
3122-34 West Carroll Ave., Chicago 12, Ill.

For more details circle NED-8019 on enclosed inquiry slip

Leading Manufacturer Reports...

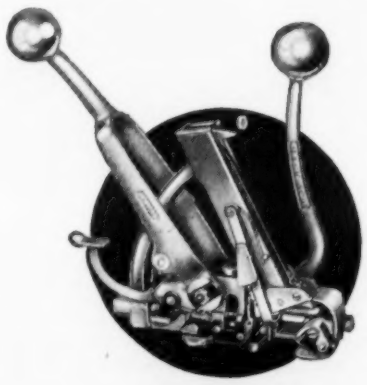
SUBSTANTIAL SHIPPING SAVINGS—

with

STANLEY Steel Strapping

Safe . . . quick . . . economical shipment of products of a prominent textile manufacturer was made possible with the Stanley Steel Strapping System. Packaging and shipping operations were speeded . . . man-hours cut to the bone. Lighter, less expensive containers were used, saving space and weight in transit.

The complete System includes tools, reels, seals, strapping and accessories—everything needed for *your* application. The Stanley Works, Steel Strapping Division, 209 Lake Street, New Britain, Connecticut. Offices in principal cities.



Improved ACE Strapping Tool

Fast, rugged and easy to operate. Positive spring feed magazine holds 100 seals. Operates in any position. Three sizes — for ⅜", ½" and ⅝" strapping.

STEEL STRAPPING and CAR BANDING SYSTEMS

STANLEY
Reg. U.S. Pat. Off.

HARDWARE • TOOLS • ELECTRIC TOOLS • STEEL STRAPPING • STEEL

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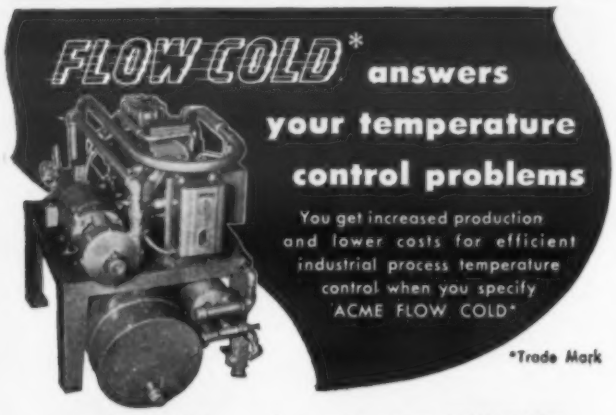

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solution cooling	compact
production welding	rugged
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laboratory cooling	saves water by recirculation
cooling chemicals	factory assembled and tested
cooling drinking water	easy to install
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or offices	ready to connect

Let an ACME Engineer help you solve your temperature control problem. Write today, for more information on your cooling problem. Address Dept. FC.

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Continuously serving the Refrigeration and Air Conditioning Industry since 1919

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Free **BOOKLET ON**

INVINCIBLE Flux Recovery Systems

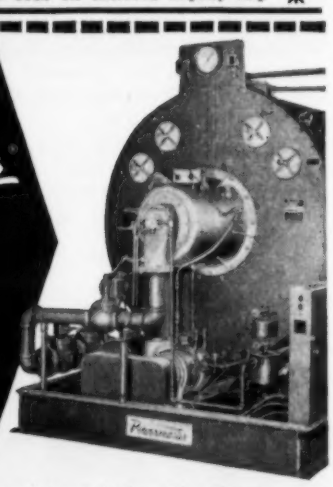
• This illustrated booklet shows how Invincible Units are saving money by efficiently salvaging unfused flux on submerged arc welding jobs. Invincibles operate more rapidly and far better than any manual method. Also, by eliminating fine dust ("flour") from the salvaged flux, they reduce welding rejects. Invincible Units are compact, easily installed and able to withstand continuous operation.

Send for your copy of this booklet now!

INVINCIBLE VACUUM CLEANER MFG. CO.
DOVER, OHIO

For more details circle NED-8022 on enclosed inquiry slip

ONLY THE *Powermaster* GIVES YOU ALL 3 ADVANTAGES



1. Wide range between high and low fire—you use less fuel. **2.** Freedom from carbon cuts clean-up time and expense—usually by 50%. **3.** Change from oil to gas (or gas to oil) in a few minutes.

To Cut Your Steam Costs Mail Coupon Today

ORR & SEMBOWER, INC. • 930 Morgantown Road • Reading, Pa.
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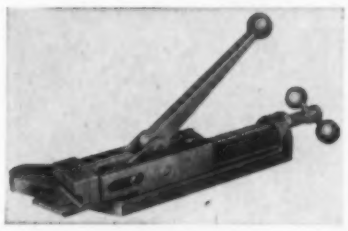
ADDRESS _____
CITY _____ ZONE _____ STATE _____

For more details circle NED-8023 on enclosed inquiry slip

METAL BENDING CLAMP
grips tubing, channels and shapes



Usable with No. 2 and No. 3 Di-Acro benders, this Quik-Lok clamp holds tubing, angles, channels and extrusions securely during forming operations. Wide-opening jaws are actuated by lever and facilitate removal of formed part. Clamp will accommodate all materials within capacity of bending machine and can be adjusted for any radius up to 9 in. Made by **O'Neil-Irwin Mfg. Co.**, 354 Eighth Ave., Lake City, Minn.

For more details circle NED-8024 on enclosed inquiry slip

AIR CONDITIONER
packaged unit saves floor space

Self-contained, this air conditioner is made in 3, 5 and 7½-ton capacities, all of which require only one electrical and three piping connections. Unit is designed to conserve floor space and reduce service and maintenance to a minimum in laboratory, drafting room, office and factory spot installations. Vibration-muffling spring mounting of compressor and glass fiber acoustic and thermal insulation contribute to quiet operation. Two-knob control panel permits user to set desired temperatures, operate the unit for either heating or cooling, or use fan alone. Made by **Trane Co.**, 2018 Cameron Ave., La Crosse, Wis.

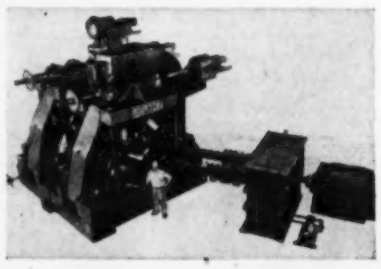
For more details circle NED-8025 on enclosed inquiry slip

SLITTER-SHEETER
cuts 3 to 26-in. sheet lengths

Provision to prevent tacky grade C type I material from sticking to cutoff knife is incorporated in model BL Corley-Miller sheeter. Machine slits and cuts sheets of barrier materials from rolls. Trip levers can be locked in "on" position for continuous action or manually tripped for each cut. Delivery of cut sheets can be into sheet accumulator tray (illustrated) or onto intermittent-motion table-height conveyor which can be integral part of machine to enable co-ordination of sheeting and wrapping operations. Speed is adjustable from 12 to 36 cuts per minute. Slitters cut up to 6 sheets with each knife stroke. Crank adjusts sheet cutting length from 3 to 26 in., and rotary cutters can be moved to new position by loosening set screw. Paper roll is replaced in 2 min. Made by **Miller Wrapping & Sealing Machine Co.**, 12 S. Clinton St., Chicago 6, Ill.

For more details circle NED-8026 on enclosed inquiry slip

BAR AND TUBE STRAIGHTENERS
built to straighten tubes and bars in diameters up to 16½ and 9 in.

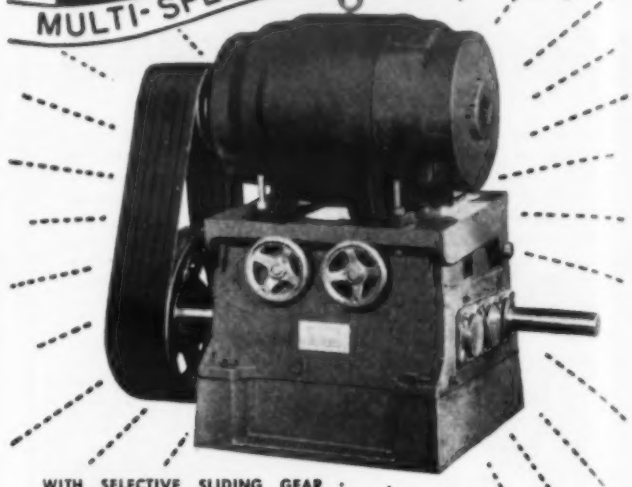


Employing a total of seven straightening rolls, No. 5 M KTC bar and tube straightener will accommodate tubes from 4½ to 16½ in. and solid bars in diameters of 4½ to 9 in. Groups of three rolls are mounted at both entry and delivery end of machine while middle idler roll serves to deflect pipe during straightening process. Three rolls introduce a minimum of ovality to pipe.

Feature of machine is automatic adjustment to proper angularity of all rolls as straightener is set for stock size by power-operated screw-downs. Middle pressure roll is adjusted manually. Automatic angling permits stock size changes in less than two minutes. Straightening speeds vary between 60 and 240 fpm using 200 hp, 300/1200 rpm adjustable speed direct current motor. Production speeds can be altered to suit individual requirements. Made by **Sutton Engineering Co.**, 1050 S. Potter St., Bellefonte, Pa.

For more details circle NED-8027 on enclosed inquiry slip

TURNER MULTI-SPEED POWER UNIT



WITH SELECTIVE SLIDING GEAR TRANSMISSIONS IN 3, 4, 6 and 9 SPEEDS . . . . . .

The TURNER UNI-DRIVE CO. is the leader in the motorizing of cone drive type machine tools. The two new multi-drive power units, 25 & 50 HP are a case in point. They are sturdy, dependable and answer the problems of power drives involving speed reduction with multiple speeds. A flick of the wrist is all that's necessary to shift to any pre-determined speed. These machines can be assembled with different gear ratios to meet specific requirements. 4-speed models 30 to 50 HP.

TURNER UNI-DRIVE CO.
3420 Terrace St., Kansas City 8, Mo.

For more details circle NED-8028 on enclosed inquiry slip

10-DAY DELIVERY!

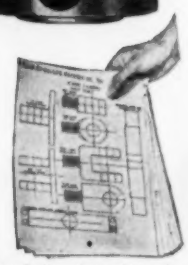
SIMPLEST... MOST COMPACT

O-M *AIR HYDRAULIC WATER CYLINDERS*

Speed production, cut costs and save space with Ortman-Miller cylinders. Full range of sizes (1-½" to 8" bores) now *available for early delivery.* All machined steel and bearing bronze. Interchangeable parts and mounting Brackets. Write today!

FREE TEMPLATES

Shows the full line in ½ scale. Request your free complete set now.



ORTMAN-MILLER
MACHINE CO., INC.
1222-4 150th Street, Hammond, Indiana

For more details circle NED-8029 on enclosed inquiry slip

The Portable MORSE ROTATOR

THE NEWEST ADDITION TO 25 YEARS OF SUCCESSFUL MANUFACTURING EXPERIENCE

SAVES TIME! SAVES LABOR! MODEL 500
SAFELY ROTATES UP TO 500 LBS. AT 10, 20 OR 40 RPM

A powerful, compact motorized unit that will cut costs of mixing, tumbling, cleaning, etc. Scientifically engineered for smooth, safe revolving. Can be loaded by ONE MAN and is easily moved. The power drive has a ¾" dia. shaft and is equipped with self-aligning bearings. Four 4" dia. Neoprene drive wheels adjustable to take from 1 to 55 gal. cylindrical containers. Wt. before crating 137 lbs. Furnished with motor and gear reduction unit. *Write For Complete Information.*

MORSE MANUFACTURING CO., INC.
127 Dickerson Street Syracuse 2, N. Y.

For more details circle NED-8030 on enclosed inquiry slip

BAKER TRUCKS require LESS MAINTENANCE

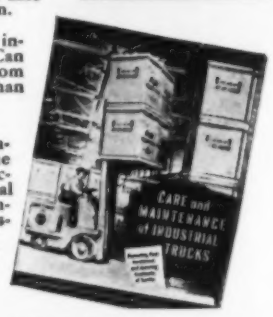
to you this means
- LESS TIME OUT OF SERVICE
- TOP OPERATING EFFICIENCY
- LOWER OVERALL COST

Baker Trucks are built to give maximum trouble-free service, and designed for easier preventive maintenance and less costly repairs.

Electric dynamic braking saves wear on brake linings and protects truck parts. Service brakes can be adjusted in 5 min., and relined in 30 min.

Power Axle has fewer moving parts and is less subject to wear. Mast assembly can be removed in 20 min. and power axle pulled in 40 min.

Trailing Axle is the simplest in use on industrial trucks. Can be removed from truck in less than 20 minutes.



These 3 illustrations are from the new 16-page picture-story manual "Care and Maintenance of Industrial Trucks." Write for your copy today.

BAKER INDUSTRIAL TRUCK DIVISION of The Baker-Raulang Company
1245 West 80th Street, Cleveland 2, Ohio

Baker INDUSTRIAL TRUCKS

For more details circle NED-8031 on enclosed inquiry slip

CONGRESS LUBRALIFE PILLOW BLOCKS

TYPE A

Self-aligning and permanently lubricated sponge iron section acts as a wick lubricating the shaft by capillary action. Vibration proof rubber grommets with static dissipator are available. Flange type bearings also available. Write for details.

PULLEYS and V-BELTS

We are in position to furnish complete lines of pulleys and V-belts from stock. Capacities up to 200 H.P.

World's Largest Manufacturer of FHP Pulleys

WRITE FOR CATALOG

CONGRESS DIAMOND BORED DRIVES
3750 E. OUTER DRIVE, DETROIT 34, MICH.

For fore details circle NED-8032 on enclosed inquiry slip

ENDS ALL SLIPPING HAZARDS in a County of San Diego Hospital!

PABCO GRIP-TREAD MASTIPAVE
Non-Slip—Wet or Dry
AMERICA'S No. 1 LOW COST LONG-LIFE FLOOR COVERING

"Before we installed Pabco Grip-Tread Mastipave" says D. R. Sloan, Superintendent, Edgemoor Farm, County of San Diego, California, "we had considerable trouble with fractures due to patients slipping on concrete floors. Mastipave has entirely eliminated these accidents. For this feature alone, Mastipave has paid for itself.

"The nurses and attendants speak very highly about Grip-Tread Mastipave, especially its ease and comfort underfoot. Low maintenance cost is a big factor, as once Mastipave floors are waxed, very little attention need be given them."

EVERY BUILDING NEEDS PABCO MASTIPAVE

For 25 years, the Nation's blue chip industries, public carriers, hospitals, public school systems have demonstrated that Pabco Mastipave costs little, looks good, wears even better! Grip-Tread is sold in roll goods only—regular Mastipave is available in roll goods and tiles.

SEND NOW FOR THE FULL STORY OF MASTIPAVE!
(Mail to Dept. L, nearest office)
PABCO PRODUCTS, INC.
New York 16 Chicago 54 San Francisco 19

For more details circle NED-8033 on enclosed inquiry slip

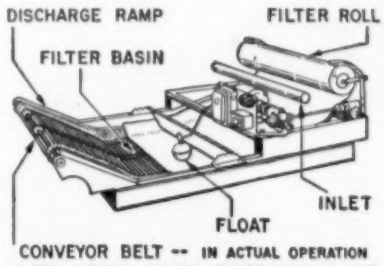
NYLON HAIR NET keeps hair in place

Fine, yet durable nylon hair nets for women employees serve double purpose in that they prevent hair from falling into face and interfering with work and are attractive at the same time. Hair can be kept neat and in place all day. Made by **Flamingo Products, Inc.**, Dept. D, Danville, Ill.

For more details circle NED-8034 on enclosed inquiry slip

COOLANT FILTER is self-cleaning gravity type

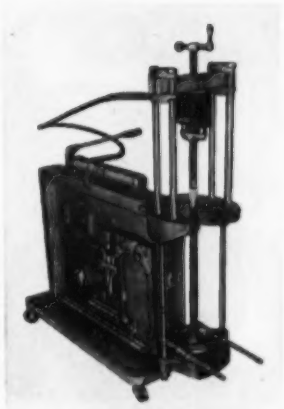
Filtering of grinding machine coolants, quenching oils and parts washing solvents is facilitated by continuous self-cleaning coolant filter operating on gravity principle. Filter material is fed from roll and rests on flat endless conveyor. Sloping sides form pool into which dirt laden liquid flows. As liquid's flow through filter is impeded by accumulation of solids its level rises. This raises float which actuates switch causing conveyor to feed clean filtering material under incoming liquid. Float drops as liquid lowers, and conveyor stops. Cycle is fully automatic. Units range in capacities from two to several hundred gallons per minute. Made by **Industrial Filtration Co.**, 1454 Industrial Ave., Lebanon, Ind.



CONVEYOR BELT -- IN ACTUAL OPERATION
FILTER MATERIAL COVERS ENTIRE CONVEYOR BELT

For more details circle NED-8035 on enclosed inquiry slip

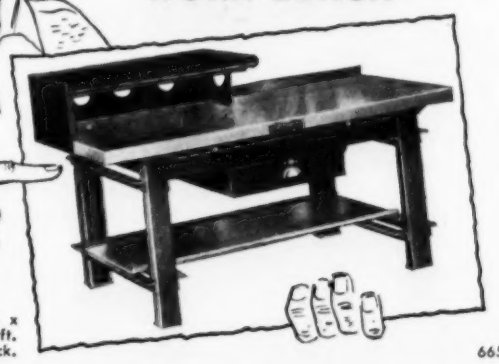
PORTABLE HYDRAULIC TOOL for pressing and pulling operations



Holding complete OTC hydraulic pulling system, portable Hydra-Tote is designed for maintenance and service work. It provides place for Puller set, holds basic items and tools, and serves as 17½-ton hydraulic press. There is 10½-in. clearance between press uprights, 11-in. clearance from ram to top of press plate and 34 in. from top of press plate to floor. Almost unlimited vertical adjustment is possible with interchangeable legs in upper press frame and three easy adjustments in lower press frame. Rubber 3-in. casters afford mobility. Made by **Owatonna Tool Co.**, 436 Cedar St., Owatonna, Minn.

For more details circle NED-8036 on enclosed inquiry slip

I CAN DO A BIGGER AND BETTER DAY'S WORK ON A CHALLENGE WORK BENCH



Four Sizes
28 inches wide x 4, 5, 6 or 7 ft. long. Top 2" thick.

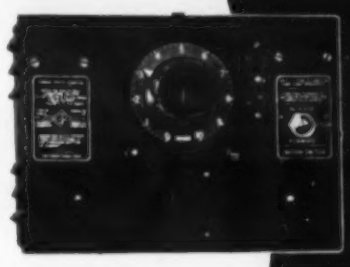
665

HERE'S WHY: Heavily ribbed, smoothly machined cast-iron top provides a "surface plate" . . . Table equipped with lock-leveling screws . . . Steel shelf in sturdy steel welded base . . . Steel tool box shelf, guard rail, and drawer with lock . . . Vise and individual light can be easily attached . . . Bench is portable. Write for details.

THE CHALLENGE MACHINERY CO.
Office, Factories, Show Room — Challenge — Grand Haven, Michigan

For more details circle NED-8037 on enclosed inquiry slip

another new Variac® SPEED CONTROL
for ½ HP D-C Motors from A-C Lines



Selenium Rectifier—*no waiting for vacuum tube to warm up — not necessary to idle rectifier for instant starting — practically indefinite rectifier life under ordinary operating conditions.*
Uses Standard ½ HP Compound or Shunt Motor
Instant Starts—Extra Fast Stops *with dynamic braking*
Single Switch *conveniently located for "Forward", "Stop" and "Reverse"*
Continuously Variable Speed Range *down to zero at constant torque*
Negligible Torque Pulsation
Excellent Regulation
Quick Starting under Heavy Loads

Type 1700-B VARIAC Speed Control $165.00

Write for VARIAC Control Bulletin

GENERAL RADIO Company
275 Massachusetts Avenue, Cambridge 39, Massachusetts
90 West Street NEW YORK 6 — *920 S. Michigan Ave.* CHICAGO 5 — *1000 N. Seward St.* LOS ANGELES 38

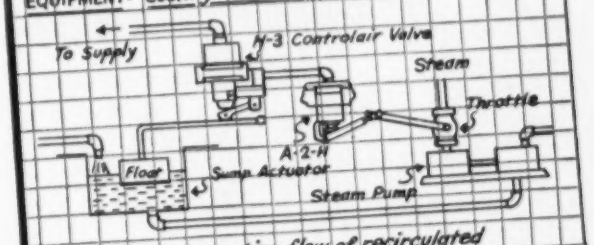
For more details circle NED-8038 on enclosed inquiry slip

Ideas for Engineers

INDUSTRIAL PRODUCTS DIVISION WESTINGHOUSE AIR BRAKE COMPANY WILMERDING, PENNA.

Datair Sheet #5

EQUIPMENT: Cooling Water Sump Control



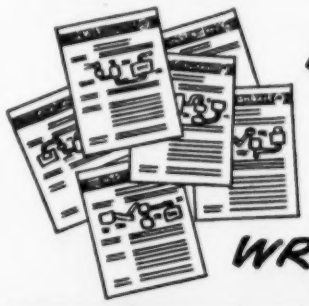
APPLICATION: To proportion flow of recirculated cooling water to processing load

SOLUTION: Westinghouse H-3 Controlair linked to float in sump. Movement of float varies delivered air pressure from valve to Westinghouse A-2-H Actuator, which positions itself accordingly, adjusting steam pump throttle

RESULT: Elimination of manual control-adequate cooling water under all rates of plant operation

Give Your Control Problems the AIR

Here's an example of how one smart Plant Engineer used W A B Pneumatic devices to inexpensively lick a continuous control problem. Our Engin*air*ing Data File shows many others. Your ingenuity will suggest ways you can adapt the ideas to solve some of YOUR problems. Write for a complete file for permanent reference. No charge.



FREE This Engin*air*ing data file

WRITE

INDUSTRIAL PRODUCTS DIVISION WESTINGHOUSE AIR BRAKE COMPANY WILMERDING, PENNA.

Factory Branch: Emeryville, Calif.
Distributors throughout the United States . . . Consult your Classified Directory.
Distributed in Canada by: Canadian Westinghouse Co., Ltd. Hamilton, Ontario

For more details circle NED-8039 on enclosed inquiry slip

Long experience, coupled with most modern equipment, combined with quality materials go into each Ohio Gear and Ohio Speed Reducer. Every detail of product and workmanship is designed to insure accuracy, durability and smooth operation.

Illustrated above are a few applications by large manufacturers who depend on Ohio Gear.

1. Ohio Gear DPL Speed Reducer operating a paint booth turn-table in a large metal working plant.
2. Ohio DS Speed Reducer, 300 to 1 ratio, used in the drive of a machine which automatically welds both heads into the shell of a 55 gallon barrel.
3. Ohio Gear DHU Speed Reducer operating an overhead scrap conveyor belt in a large die casting plant.
4. A PL2 Reducer, 40 to 1 ratio, operating the turn-table of a machine automatically welding automobile crankshaft vibration dampers.
5. Series of Ohio Gear HS Speed Reducers operating conveyors in a California fruit packing plant.
6. Detroit RotoGrate Industrial stoker using an Ohio DHH2 Speed Reducer as part of auxiliary equipment.

Consult your nearest distributor or write us for complete information.

ESTABLISHED 1915
THE OHIO GEAR COMPANY
1320 EAST 179th STREET • CLEVELAND 10, OHIO

OHIO GEARS

▲ For more details circle **NED-8040** on enclosed inquiry slip ▲

PERMACEL
News Graphic
SPEEDING PRODUCTION WITH INDUSTRIAL TAPES

SPEEDIER, LESS EXPENSIVE "BUNDLING"
PERMACEL Cloth Tape speeds assembling jobs for R.O.W. Distributors, of Rocky Mount, Va. Tape is easily applied; sticks tightly, is easily removed.

FREE!
JUST OFF THE PRESS

New 32-page use book. Send for your copy today. Over 100 close-up photographs of new and dollar-saving uses of tape. Write Dept. 5C.

INDUSTRIAL TAPE CORP., NEW BRUNSWICK, N. J.

NAME ..... FLEASE PRINT
TITLE .....
COMPANY .....
ADDRESS .....
CITY ..... STATE .....

Permacel
INDUSTRIAL TAPES
INDUSTRIAL TAPE CORPORATION, NEW BRUNSWICK, N. J.
makers of ©TEXCEL Cellophane Tape, and a complete line of pressure-sensitive tapes for industry.

▲ For more details circle **NED-8041** on enclosed inquiry slip ▲

TRUCK TRESTLE
with 16,000 lb capacity

A practical support for use in garages, machine shops, industrial plants, roundhouses and airline maintenance terminals, this Unit Utility Horse all-purpose truck trestle has 16,000 lb capacity and is adjustable to six positions using locking pin. It stands 12⅞ in. high with tube sleeve lowered and 21½ in. extended. A 10 x 10-in. base offers positive footing, and unit's cylinder sleeve, which cannot be lowered until weight is removed, extends 2 in. above legs for added bracing. U-crutch seat is suitable for supporting long steel bars for feeding to power saws. Made by **Unit Mfg. Co.**, Dept. I-7, 1229 Harmon Place, Minneapolis 3, Minn.

▲ For more details circle **NED-8042** on enclosed inquiry slip ▲

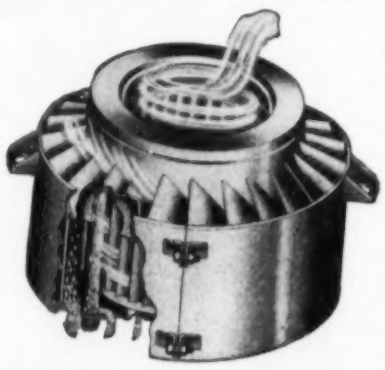
SAFETY SAW BLADE
fits standard portable saws

Universal bore that fits all standard portable saws without bushings or adapters is main feature of circular saw safety blade. Tool offers fast cutting, low power requirements and safety from "kick-backs" as added features. Blades are available in all sizes from 6 in. up, and 5-in. sizes will be manufactured. Made by **PTI Inc.**, 401 Broadway, New York 13, N. Y.

▲ For more details circle **NED-8043** on enclosed inquiry slip ▲

STEAM PURIFIER
removes entrained particles

Usable inside steam drums, flash tanks, evaporators, packed towers, deodorizers and stills, Hi-eF purifier delivers vapor with 1 part per million or less of total solids. Featuring compactness and low pressure drop, device removes entrainment in three stages by combination of centrifugal flow and velocity change. Entrainment is discharged below liquid level by means of ejects. Units are available in range of sizes from 4 to 72 in., fabricated of steel, stainless and alloys to meet operating conditions. Made by **V. D. Anderson Co.**, 1932 W. 96th St., Cleveland 2, O.



▲ For more details circle **NED-8044** on enclosed inquiry slip ▲

see our CATALOG in SWEET'S FILES for PRODUCT DESIGNERS

Have you seen Gast Application Ideas booklet, showing 26 product problems and solutions? Sent on request.

WHAT NEXT?
GAST rotary AIR MOTORS
run on gas pressure to drive liquid pumps!

Alert designers are still finding new ways to exploit the unique advantages of Gast Air Motors. For example:

PROBLEM: Find explosion-proof drive for McCord Chemical Pump, used in oil fields. Electricity often not available.

SOLUTION: Gast Air Motor, driven by pressure of natural gas from field, turns 250 r.p.m. to drive liquid pump through worm gear.

RESULT: Dependable, "free" power; low motor cost.

What next? Perhaps *you'll* find a job that can be done *better* with Gast rotary-vane Air Motors. Remember these unique characteristics: They're compact, explosion-proof, widely variable in speed. Overloads can't burn them out! Sizes from 1/20 to 3 H.P., some reversible. Write Gast, "Air may be your Answer!"

Original Equipment Manufacturers for Over 25 Years

GAST ROTARY AIR MOTORS (TO THREE H.P.) • COMPRESSORS (TO 30 LBS.) • VACUUM PUMPS (TO 28 INCHES)
GAST MANUFACTURING CORP., 115 Hinkley St., Benton Harbor, Mich.

▲ For more details circle **NED-8045** on enclosed inquiry slip ▲

ALLIS-CHALMERS COMBINATION STARTERS

SAVE SPACE...
SPEED INSTALLATION!

When you need both a magnetic starter and a safety switch for a motor, select an Allis-Chalmers circuit breaker-type combination starter. A neat installation can be made quickly . . . starter and switch are factory wired in a single enclosure to save you time and space.

You get a starter that has silver-to-silver double break contacts, non-carbonizing arc chambers and easily accessible renewable parts. The circuit breaker gives short circuit protection . . . serves as a disconnect switch.

These combination starters are available in sizes 0 through 5 for motors from fractional to 200 hp, 110-550 v. With fusible or non-fusible disconnecting switches they are also available up through size 3.

There is an Allis-Chalmers starter for every motor need. Bulletin 14B7132 describes manual, magnetic, combination, and reversing starters for 110-550 volt motors. Contact your nearby A-C representative, or write Allis-Chalmers, Milwaukee 1, Wisconsin.

A-3498

ALLIS-CHALMERS

▲ For more details circle **NED-8046** on enclosed inquiry slip ▲

▲ For more details circle **NED-8047** on enclosed inquiry slip ▲

MARKEM®

marks them all

FROM ARTILLERY SHELLS TO MEDICAL AMPULES

MASTERS OF MARKING — Since 1911

Markem methods, machines, type and inks have been marking the products of industry for forty years. Markem machines can mark up to many thousands of pieces per hour. They make clear, durable imprints on flat, curved or irregular surfaces of paint, paper, wood, glass, metal, leather, plastic, rubber, fabric, composition and pressure sensitive tapes. No special skill is needed for their operation. Legend and color of imprint may be quickly and easily changed.

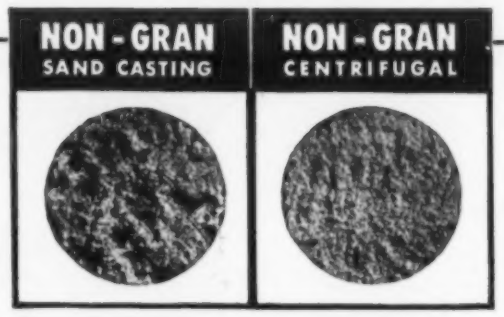
MAKE YOUR MARK WITH MARKEM

When your products need marking for Identification, Control or Market — ask Markem. Submit your problem, together with a sample of the item to be marked. Markem Machine Company, Keene 3, New Hampshire.

MARKEM BETTER MARKING SINCE 1911

▲ For more details circle **NED-8048** on enclosed inquiry slip ▲

Which is better for YOUR PRODUCT?



We produce sand castings in any of the bronze alloys to three specifications: Aircraft, high grade bearing, commercial. We also centrifugally cast bronze alloys. Request free booklet.

American Non-Gran Bronze Co., Berwyn, Pa.

NON-GRAN

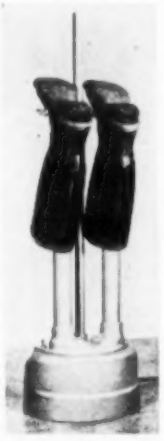
▲ For more details circle NED-8049 on enclosed inquiry slip ▲

FREEZE-DRYING UNIT is cylindrical chamber type

Designed for drying large numbers of small-volume containers or bulk materials in trays, model 203 freeze drying unit has batch capacity of 900 milliliters. Unit consists of cylindrical chamber with sight glass in cover to allow inspection of containers during drying cycle. Materials are dried on electrically-heated 18-in. diameter shelf which is controlled thermostatically. Standard equipment includes high vacuum pump and McLeod Gage, with nine desiccant baskets and supply of desiccant. Four drying cycles can be made before regeneration of desiccant is necessary. Made by **F. J. Stokes Machine Co.**, 5900 Tabor Rd., Philadelphia 20, Pa.

▲ For more details circle NED-8052 on enclosed inquiry slip ▲

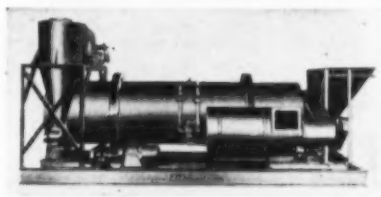
BOOT & SHOE DRIER has 5300-Btu output



Drying of boots and shoes can be carried out by Sani-Dri drier which produces 125-cfm air stream heated by 13.5-amp element with 5300-Btu output. Boots are placed on bracket over metal tubes through which heated air blows. Circuit breaker protects heating element from overloading. Portable unit has aluminum hammeroid finish and uses alternating or direct current. It is manually operated and is equipped with drying tubes and adjustable foot bracket. Made by **Chicago Hardware Foundry Co.**, 3501 Commonwealth Ave., North Chicago, Ill.

▲ For more details circle NED-8053 on enclosed inquiry slip ▲

BULK PRODUCTS DRIER has variable feed rate



Consisting of rotary drier with drive, screw feeder, air heater, fan and dust collector integrally mounted on steel frame, unit facilitates drying of chemical products, raw materials, synthetic compounds and food products. Products are fed continuously into drier by feeder which has adjustable feed rate of 3:1. Equipped with automatic thermostatic control, dryer uses oil or gas-fired air heater, or steam as source of preheated air. System does not re-cycle fresh air drawn in, and combustion gases pass in direct contact with product without deleterious effects. Standard sizes include lengths from 10 to 24 ft in diameters of 2, 2½ and 3 ft and are available in plain, stainless or white acid and abrasion-resistant Porox linings. Made by **Patterson Foundry & Machine Co.**, 123 Helene Ave., East Liverpool, O.

▲ For more details circle NED-8054 on enclosed inquiry slip ▲

The right teeth make a big difference

Proper design, even height, uniform sharpness and correct hardening of teeth are very important in increasing the life and efficiency of a file.

Nicholson manufacture has always given uppermost thought to these vital factors relating to the myriads of tiny "business ends" of one of industry's most indispensable hand tools.

Thus, it can be said that Nicholson and Black Diamond files "speak through their teeth." And what they say is, *"Twelve perfect files in every dozen*—made from top-quality file steel and 87 years' experience." *Sold through industrial distributors.*

HOW TO SELECT, USE AND CARE FOR *The right file for the job* is described in words and pictures in Nicholson's book, **"FILE FILOSOPHY."** FREE. How many copies do you need?

NICHOLSON FILE CO., 34 Acorn St., Providence 1, R. I.
(In Canada, Port Hope, Ont.)

NICHOLSON U.S.A. **NICHOLSON** A FILE FOR EVERY PURPOSE BLACK DIAMOND TRADE MARK

▲ For more details circle NED-8050 on enclosed inquiry slip ▲

SAFER LONGER ... SO THEY COST LESS

SURETY'S SURESEAL SYNTHETIC RUBBER Industrial Gloves have 10 times higher abrasion resistance, 4 times higher snag resistance, much higher resistance to virtually all industrial chemicals, than either rubber or standard synthetics.

See your distributor or write

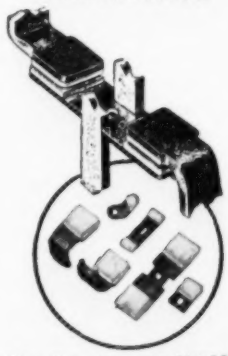
THE SURETY RUBBER CO. Dept. N CARROLLTON, OHIO

IN CANADA: Safety Supply Co., Toronto, Ont.

▲ For more details circle NED-8051 on enclosed inquiry slip ▲

PROBLEM: How to Get Higher Performance and Longer Wearing Qualities in Contact Assemblies

GENERAL PLATE: Meets the Specified Requirements with TOP-LAY, A Composite Metal Combination



Have You a Composite Metal Problem? General Plate can solve it for you.

Manufacturers of electric motor starters had frequent trouble with contact assemblies which were made by brazing the contact to the base metal carrier. This method results in annealed contacts and carriers which in turn means lack of strength, poor wearing qualities and short contact life.

General Plate's Top-Lay contacts and contact material meet the engineering specifications by providing the higher performance necessary. Made by cladding silver or precious metal strip to suitable base metal, Top-Lay is cold worked by profile rolling which gives it a hard, long-wearing surface. In addition, Top-Lay saves on fabrication costs as it is easily blanked and formed to the required shape. (For information on Top-Lay write for Technical Data Bulletin #714.)

No matter what your metal problem, it will pay you to consult General Plate. Their vast experience in cladding precious to base metals, or base to base metal combinations can overcome your problems ... often reduce costs as well.

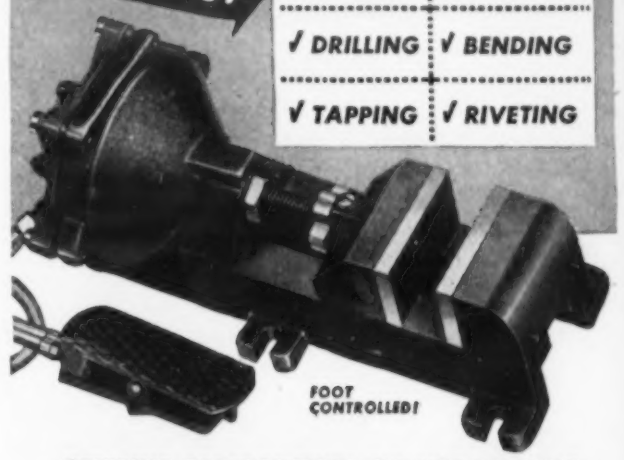
General Plate Products include . . . Precious metals clad to base metals, Base metals clad to base metals, Silver Solders, Composite contacts, buttons and rivets, Platinum fabrication and refining, Age-hardenable #720 Manganese Alloy.

GENERAL PLATE *Division of Metals & Controls Corporation* 810 FOREST STREET, ATTLEBORO, MASS.

▲ For more details circle NED-8055 on enclosed inquiry slip ▲

SPEEDY AIR VISE

SPEEDS UP ✓ MILLING ✓ PUNCHING ✓ DRILLING ✓ BENDING ✓ TAPPING ✓ RIVETING



GRIPPING FORCE 15 TIMES AIR LINE PRESSURE

Speedy Air Vise helps you do dozens of operations faster, better, cheaper—by air pressure! Foot control valve opens and shuts vise instantly, leaving *both* hands free to produce *more!* Jaw opens up to 3 inches, holds castings, parts, jigs, etc. Compact and trouble-free.

Complete with Foot Control, Air Hose and *Fittings*.....only **$29.90**

Prompt Delivery from Your Supplier or Write Direct

W. R. BROWN CORPORATION • 2647 N. Normandy Ave. • Chicago 35, Ill.

AIR REGULATORS • AIR FILTERS • AIR GUNS • PORTABLE COMPRESSORS

▲ For more details circle NED-8056 on enclosed inquiry slip ▲

Install a lift truck system for only $249.00

with a RED ARROW engineered by

W. C. Stuebing

With Stuebing Red Arrow Lift Trucks the time and work savings of the lift truck system are available to plants and departments where needs do not warrant expensive power trucks. One Stuebing Red Arrow and twenty rugged, low-cost platforms, easily built in your own plant, give you a lift truck system for any plant or department, small as it may be. And your total investment is only $249.00.

Think of it! For an investment cost of only 26 cents a week you have a lift truck system available at all times! For these few pennies you save the time of three men . . . release them for profitable, productive work.

Let Stuebing engineers show you how to enjoy the savings of the Red Arrow System in your plant.

FREE: Full details on Red Arrow System and blue print of platform. Use coupon below.

Lift Trucks INCORPORATED 2425 Spring Grove Ave. Cincinnati 14, Ohio

Show me how to install the Red Arrow lift truck system for just $249.00.

Name_____

Company_____

Address_____

▲ For more details circle NED-8057 on enclosed inquiry slip ▲

5 Advantages of the ELWELL-PARKER Roll Clamp Truck

Here is why this Elwell-Parker is unmatched for handling roll paper and other materials in roll form—

1. **SNUG STACKING**—because truck's clamp can grip rolls short of their maximum diameter.
2. **ADJUSTABLE CLAMP PRESSURE**—Safe and positive, yet variable for different papers, winding tensions, or wrappers.
3. **NO PALLETS NEEDED**—Saves up to 20% in space.
4. **VERTICAL OR HORIZONTAL HANDLING**—Truck carries and stacks rolls in either position.
5. **NO STOCK DAMAGE**—Many E-P roll handlers repay their costs by eliminating spoilage.

GET ALL THE FACTS

Write for E-P Reporter No. 8. The Elwell-Parker Electric Company, 4096 St. Clair Ave., Cleveland 3, O.

Rolls up to 3500 lbs. are readily handled.

▲ For more details circle **NED-8058** on enclosed inquiry slip ▲

COSMOLINE COATED GUN COMPLETELY DEGREASED

IN LESS THAN 4 MINUTES

Four 20mm. guns heavily coated with Cosmoline are raised from the degreaser in a clean, dry condition, ready for subsequent operations.

WITH A PHILLIPS *Electric* VAPOR DEGREASER

HERE was a really tough metal cleaning problem. Cline Electric Manufacturing Company, Chicago, had to remove Cosmoline from 20mm. guns before modification operations on the guns. Cline purchased a Phillips electric batch-type degreaser to handle the job. As a result sixteen guns are being degreased per hour at a savings of 85% on cleaning costs per gun.

Here is another instance of how Phillips degreasers cut costs through faster, more thorough, more economical metal cleaning. For the answer to your degreasing problems, check with Phillips.

SEND FOR YOUR FREE COPY OF NEW ILLUSTRATED DEGREASER BULLETIN

Phillips 3463 Touhy Avenue • Chicago 45, Illinois
MANUFACTURING COMPANY
Engineered Metal Cleaning Equipment

▲ For more details circle **NED-8059** on enclosed inquiry slip ▲

Foley Sharpened Saws CUT HIGH LABOR COSTS

Your saw operator's production jumps 25 to 40% when the saw he uses is sharpened on a New Model 61 Foley Automatic Saw Filer. His saw will cut faster, smoother, run cooler and *stay sharp longer.*

NEW MODEL 61 FOLEY AUTOMATIC SAW FILER

Prove it by 30 DAY TRIAL in Your Own Shop

Try the Foley Automatic Saw Filer for 30 days in your own shop. You'll be under no obligation. See how it sharpens your hand saws, band saws up to 4" wide and cross-cut circular saws 3" to 24" in diameter. Notice how the Foley Automatic Saw Filer automatically corrects uneven teeth caused by poor filing and restores them to even size, shape and spacing. You'll say the Foley Automatic Saw Filer is a "must" for every well run wood-working plant.

FREE BOOK TELLS HOW—The instruction book that goes with the Foley Automatic Saw Filer is yours for the asking. Here you can read how inaccuracies are eliminated through simple and positive adjustments. This book does a double job . . . helps you cut production costs with better cutting saws and shows you how to lower your saw maintenance costs.

FOLEY MFG. CO.
3323 N. E. 5th St., Minneapolis 18, Minn.
Please send instruction book and information on 30-day trial offer.
Name .....
Address .....

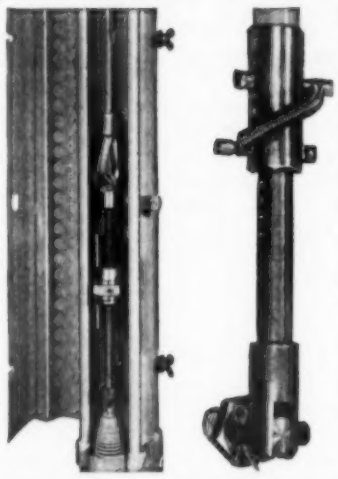
▲ For more details circle **NED-8060** on enclosed inquiry slip ▲

HYDRAULIC VISE controlled by foot pedals

Maximum jaw pressure of 4000 lb can be exerted with No. 1004 fast-operating hydraulic machinists' vise having maximum hydraulic pressure of 7000 psi. Jaws can be closed without damaging light castings or finished surfaces. Vise is controlled by two foot pedals, one for power, the other for release. Stop control is adjustable so that any production work is gripped and held with single power stroke. Weighing 80 lb, vise has closing speed of ⅞ in. per pump stroke, while vise opening can be accomplished in three seconds. Made by **Columbian Vise & Mfg. Co.**, 9000 Bessemer Ave., Cleveland 4, O.

▲ For more details circle **NED-8061** on enclosed inquiry slip ▲

PUNCH PRESS SAFETY DEVICE improved pull-back easily adjusted



Single convenient adjustment on improved Possons safety device for punch press operators takes care of both hands. Pull-back adjustment which controls location of operator's hands can be made while standing on floor. It consists of knurled nut on 10-in. screw (left illustration). Turning nut will lower or raise clip of pull-back at correct place. Hinged guard is closed and locked, if desired, after adjustment is made. Solid pins for adjusting ram connection rod are held in place by 2-in. length of coil spring. Operator is reminded to use hand straps by arrangement for hanging them on face of bolster plate when he leaves press. Made by **Positive Safety Mfg. Co.**, 4411 Perkins Ave., Cleveland 14, O.

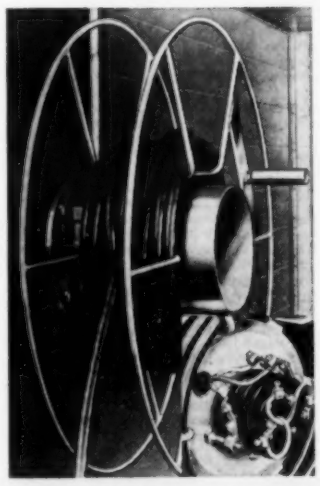
▲ For more details circle **NED-8062** on enclosed inquiry slip ▲

LEVER-ACTUATED SWITCH uses low operating force

Rigid lever actuation of V series of type A high capacity basic switches makes possible lower operating force than that offered by flexible leaf actuated switches. Listed by Underwriters' Laboratories, switches are rated for ¾-hp, 115 v ac; 1½ hp, 230 v ac; 20 amp, 125, 250 or 460 v ac; 10 amp, 125 v ac (latter for controlling tungsten filament lamp loads on alternating current circuits). Long straight lever, short lever with roller and long lever with roller are offered. Switches have 0.020-in. contact break distance. Contact arrangement is single-pole, double-throw. Solder lug, integral screw terminal and side facing binder head screw terminal types are available. Made by **Minneapolis-Honeywell Regulator Co.**, Micro Switch Div., 205 S. Chicago Ave., Freeport, Ill.

▲ For more details circle **NED-8063** on enclosed inquiry slip ▲

POWER CABLE REEL designed for truck or wall mounting



Handling of heavy electrical cable is simplified by use of Powereel for permanent mounting on truck, walls and other places. Having advantages of time and labor savings and reducing cable wear, reel has flange on side for mounting to base by four ⅜-in. bolts. Flange is threaded to fit 1-in. iron conduit or afford watertight connection for flexible feeder cables. Cable sizes up to No. 4 four-conductor can be handled. There is no current interruption during winding or unwinding. Reel is available in any size with either 75-amp collector ring for two, three or four conductors, or 30-amp ring for up to 16 conductors. Made by **Industrial Electrical Works**, Dept. 95, 1511 Chicago St., Omaha 2, Nebr.

▲ For more details circle **NED-8064** on enclosed inquiry slip ▲

for LOWER COST *Materials Handling*

Whether you figure by years of use or by tons handled, BAL tote boxes cost less because they last longer. They're *hard*

Easy to handle, hard to wear out; and double-strength at ALL reinforcements. Trucks as well as tote boxes made in many sizes for various purposes.

TRUCKS & TOTE BOXES

WILLIAM BAL CORPORATION
11 Johnson Street, Newark 5, N.J.

▲ For more details circle **NED-8065** on enclosed inquiry slip ▲

Only genuine RIDGID guarantees economy

RIDGID Booths 918-920-922 at the Plant Maintenance Show—Cleveland Jan. 15-18

This Work-Saver RIDGID assures you . . . "No pipe wrench housing repair expense."

● You'll find no substitute for the smart-working, long-lasting qualities that have made RIDGID the world's most popular pipe wrench. Breakproof housing, full-floating hookjaw with handy pipe scale, replaceable heeljaw, adjusting nut that spins easily in all sizes, 6" to 60", comfort-grip handle—these plus the RIDGID name mean more service and tool satisfaction for your money. Buy at your Supply House.

RIDGID
Work-Saver Pipe Tools
THE RIDGE TOOL CO. • ELYRIA, OHIO

▲ For more details circle **NED-8066** on enclosed inquiry slip ▲

SAVE TIME MONEY MATERIAL WORK

Chromalox Catalog 50 Shows You

The Chromalox Catalog is filled with valuable data on the use of electric heat to lower costs and increase production in your plant. It shows over 15,000 types and sizes of electric heaters for heating air and other gases, liquids, viscous fluids and solids; for heating dies, molds, platens, moving parts and other equipment. A section is devoted to the new all-metal radiant heaters for baking, curing, drying and other infrared applications. Put Chromalox Electric Heaters to work in your plant.

WRITE FOR YOUR COPY OF CHROMALOX CATALOG 50 TODAY.

Industrial Division EDWIN L. WIEGAND CO., 7509 Thomas Blvd., Pittsburgh 8, Pa.

See other advertisement on page 4

CHROMALOX 18-24

ELECTRIC HEAT FOR MODERN INDUSTRY

For more details circle NED-8067 on enclosed inquiry slip

Pays 400% per year

Saves $11,549 annually—in lower scrap losses, faster production

®MULTIPRESS brings typical gains at Penn Electric Switch Co., Goshen, Ind.

THE JOB—Staking five metal parts on a bakelite base, with a single ram stroke, to form the magnetic switch shown above.

THE RESULTS—1. Production speed almost doubled. 2. Scrap losses 84% lower. 3. Two types of switches staked in continuous 5 to 1 ratio, without tooling changes. 4. Quality of product *uniformly* higher. 5. "Chasing" threads on staked parts no longer necessary. 6. Work hazards eliminated. 7. Operators like the quieter, smoother action of Multipress. 8. Total saving: $11,549.00 *per year* on a $3000 Multipress setup.

If you are interested in gains like these, for almost any job in the "pressing" field, send now for full details on the fast, versatile, oil-hydraulic Multipress. 8 frame sizes; one to 50-ton capacities. Write today!

DENISON HydrOIL ics

The DENISON Engineering Co.
1151 Dublin Rd., Columbus 16, O.

For more details circle NED-8068 on enclosed inquiry slip

FOR THE FIRST TIME

56 pages

Available Now!

To PRODUCT DESIGNERS who can profit by using OIL HYDRAULIC CYLINDERS in their equipment.

Ask for catalog H-3

The COMMERCIAL SHEARING & STAMPING COMPANY
YOUNGSTOWN 1, OHIO

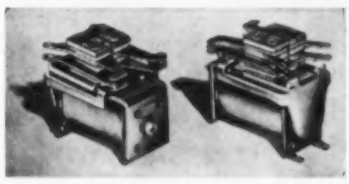
For more details circle NED-8069 on enclosed inquiry slip

LIGHTWEIGHT DOCKBOARD has lock to prevent slippage

Improvement incorporated in lightweight magnesium dockboard is lock in ramp section which drops in place automatically against the dock and securely holds unit in place during loading operation. This device eliminates any possibility of board slippage and assures safety in use. Made by **Magline, Inc.**, P. O. Box 346, Pinconning, Mich.

For more details circle NED-8070 on enclosed inquiry slip

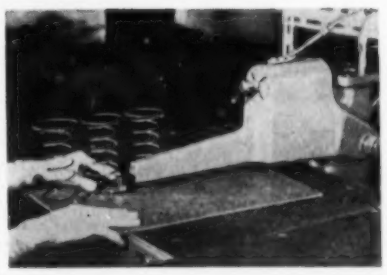
MINIATURE RELAYS of class 11, telephone type



Designed for mobile communications equipment and similar applications where small size, light weight and resistance to shock and vibration are required, Class 11 miniature telephone type direct current relays feature iron-to-iron hinge and efficient coil construction. Units are offered in coil resistances from 0.12 to 11,000 ohms with coil power of 40 milliwatts to 3 watts dc in contact combinations up to four pole-double throw and contact ratings of 1 amp at 115 v ac or 24 v dc noninductive load. Ratings up to 5 amp are available on special order. Weight is less than 2½ oz, and dimensions are 1-15/32 in. long, 15/16-in. wide and height varying with contact combination. Variety of mountings and enclosures is available. Made by **Magnecraft Electric Co.**, 1442 W. Van Buren St., Chicago 7, Ill.

For more details circle NED-8071 on enclosed inquiry slip

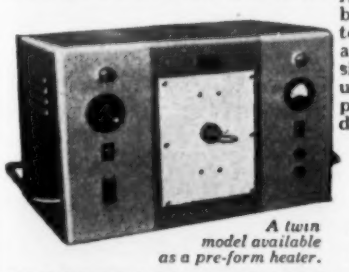
AUTO SEAT SPRING STITCHER permits use of Masonite panels



An upside-down version of N2A-20 Acme Morrison automotive seat stitcher makes possible stitching of coil springs to Masonite panels instead of stamped-steel seat frames formerly used. Clinching arm of stitcher is on top rather than under work, and stitches can be located visually and formed at production rates. Legs of stitches are forced through panel, wrapped around spring and return to touch board. Stitches are cut, formed, driven and clinched in 1/5-second when operator depresses electrically-controlled foot pedal. Wire is fed to shearing mechanism from 25-lb coil holder with braking device which prevents overrunning and wire from tangling. Made by **Acme Steel Co.**, Stitching Wire Div., 2822 Archer Ave., Chicago 8, Ill.

For more details circle NED-8072 on enclosed inquiry slip

High Frequency Electronic Heating Machine Operates Continuously at Maximum Output



A twin model available as a pre-form heater.

A 1500 watt induction heater, built *up to a standard*, not down to a price. Quality components and construction prevent expensive breakdowns, allow continuous operation. We invite comparative tests with other induction heaters.

LEWIS

This machine now available in various sizes. Write for more information.

LEWIS MACHINE COMPANY

894 NEWCOMB STREET • ST. PAUL 6, MINNESOTA

For more details circle NED-8073 on enclosed inquiry slip

M&M air fluff paper shredder

The Air-Fluff Paper Shredder is used for the commercial manufacture of paper excelsior. Also speedily, safely and efficiently destroys blueprints, letters and confidential records. Built in 3 sizes ranging in capacity from 200 to 2500 pounds per hour. Each machine can be adjusted to cut widths of 1/8", 3/16", 1/4", or 3/8". Write for descriptive literature.

mitts & merrill
1000 South Water • SAGINAW, MICHIGAN

For more details circle NED-8074 on enclosed inquiry slip

WORLD'S FINEST® SLITTER KNIVES AND SHEAR BLADES made in OK Battle Axe, OK Dura Chrome and OK Standard.

The cutters shown are used on gang slitters — side trimmers and for tin plate. They are held to ± .00025 tolerances and are given an extremely high finish. Closer tolerances can be furnished on request.

We also furnish hardened and unhardened spacers with the same close tolerances and high finish as the slitters.

The large shear blade shown is furnished in the above three grades for shearing any type of metal and are made to fit any machine. Send us your inquiries giving quantities and sizes.

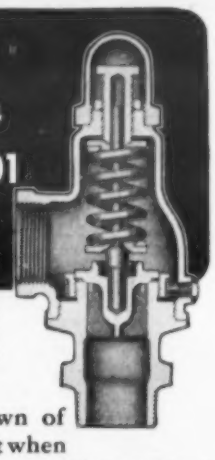
OK ROTARY SHEARS-BLADES are designed to give maximum service — tough as they come!

OHIO KNIFE Co. CINCINNATI 23, OHIO

WORLD'S LARGEST EXCLUSIVE MANUFACTURERS OF KNIVES

For more details circle NED-8075 on enclosed inquiry slip

protect against excess pressures use CRANE No. 2601 BRASS RELIEF VALVES



PRESSURE RANGE: 5 to 250 pounds steam, water, or oil at 400° F. Max. Temp.; 250 to 300 pounds water or oil at 100° F. SIZES: ⅜ to 2-in.

You can prevent costly breakdown of pumps, presses, and other equipment when Crane Brass Relief Valves protect your piping systems against excess pressures. For these precision-built Crane valves react instantly when pressure in pipe lines exceeds a pre-set limit.

True seating is assured by long bottom guide on the disc. Asbestos packing in stuffing box effectively seals body and prevents leakage around adjusting screw. Sizes ½-inch and larger have blow-back regulating rings.

SEE YOUR NO. 49 CRANE CATALOG

CRANE CO., 836 S. Michigan Avenue, Chicago 5, Ill.
Branches and Wholesalers Serving All Industrial Areas

CRANE *Equipment for Every Piping System*

VALVES • FITTINGS • PIPE • PLUMBING AND HEATING

For more details circle NED-8076 on enclosed inquiry slip

Save SPACE, LABOR

Handle Materials with a **MOTO-TRUC**

The shortest battery operated walkie pallet truck built.

Operates in narrower aisles.

Easiest to operate. All controls in easy grip roller type handle.

Patented Nydegger shackles eliminates bumps while moving loads.

12-volt power for level operation, higher voltage for ramps, at amazingly low cost. Capacity: 4,000 pounds.

WRITE FOR BULLETIN NO. 51

The MOTO-TRUC Co.
1953 E. 59th Street
CLEVELAND 3, OHIO.

Originators and world's largest exclusive manufacturers of motorized, battery operated walkie type trucks

For more details circle NED-8077 on enclosed inquiry slip

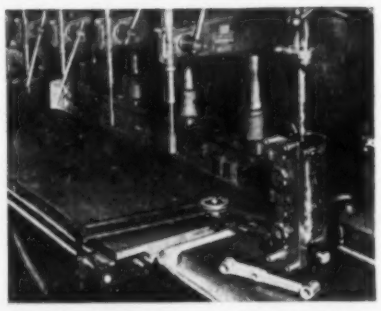
MOLD MAKING MACHINE features automatic control from push-button stand

Designated model No. 2364, large mold making machine for producing massive copes and drags of uniform standard is jolt-squeeze-strip type. It features centralized automatic control of operations from convenient push-button stand. Operating on standard 80 psi, machine has squeeze capacity of 80,000 lb and jolts castings weighing up to 4000 lb. Squeeze cylinder diameter is 36 in.; pattern draw, 14 in.; and piston stroke, 14 in. Flask space ranges from 38-in. minimum to 54-in. maximum, left to right, and from 32 to 50 in. front to back.

Power operated squeeze head has cycle regulated by pressure switch while jolt cycle is timer-controlled. Two-speed vibration and stripping operations are automatic to eliminate dependence upon operator's judgment. Although recessed 50 in. below floor level, all servicing can be done at or above floor. Made by **SPO Inc.**, 6474 Grand Division Ave., Cleveland 25, O.

For more details circle NED-8078 on enclosed inquiry slip

TORQUE ABSORBING DEVICE made in two sizes for inline multiple spindle drill presses



Front Torkrail unit for Torkarm device that absorbs torque on drill presses and tappers enables latter unit to be moved from spindle to spindle down front of inline multiple spindle drill press. Work or fixture can be placed on work plate, with Torkarm attached directly to fixture or fixture held by special Quic-Clamp. With either method, work is free to "float" under spindles, yet is always under safe torque control of Torkarm which holds work dead center and stationary under any torque load.

Front Torkrail is attached to front trough of any inline drill press. One or more saddles are mounted on it, a Torkarm riding each saddle. There is no limit to number of holes or their position in fixture which can be completed under each spindle. Tumble jigs can be used and more than one job can be run on same machine at same time with extra saddles. Series No. 300 Torkrail is for work requiring up to 1½ hp and series No. 500 for heavy duty work. Made by **Torkarm Corp.**, 2901 Emerson Ave. S., Minneapolis 8, Minn.

For more details circle NED-8079 on enclosed inquiry slip

precision built...
powerful...
highly efficient...

Cramer

synchronous timing motor

Widely used for applications requiring a constant speed at a given frequency, the Cramer Type SX Synchronous Motor is a self-starting permanent magnet type motor . . . producing an exceptionally high torque. Compact . . . precision-built . . . with output speeds from 60 RPM to 1/24 RPH. Write for complete data.

THE R. W. CRAMER CO., INC.
BOX 28, CENTERBROOK, CONN.

INTERVAL TIMERS • RESET TIMERS • CYCLE TIMERS • PULSE TIMERS
TIME DELAY RELAY • RUNNING TIME METERS • PERCENTAGE TIMERS

4CR51

For more details circle NED-8080 on enclosed inquiry slip

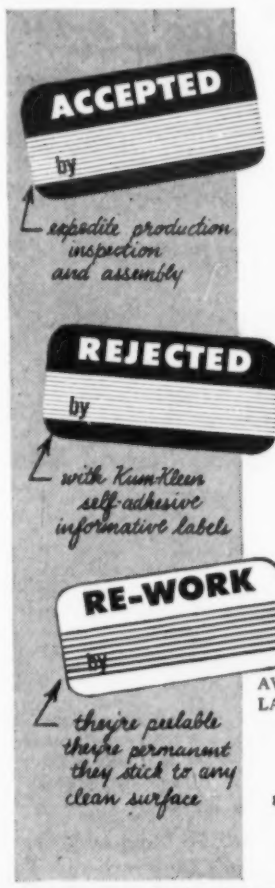
18 WAYS TO SAVE TIME & MONEY!
with the Mead Industrial Burring Machine

Wood-Plastic-Metal

New circular explains, illustrates 18 ways in which the Mead Industrial Burring Machine saves time and money—also contains special Grit Guide. Every industrial plant needs this "Jack-Of-All-Trades" machine. Your burring can be done in "free time"—install these machines by every machine tool which leaves burrs. Grinds, finishes both outside and inside cut-out openings. Immediate delivery in most cases. Write for the informative Money-Saving circular now.

MEAD SPECIALTIES COMPANY
4114 NO. KNOX AVE. DEPT. N-101-A CHICAGO 41, ILL.

For more details circle NED-8081 on enclosed inquiry slip



new, removable Kum-Kleen inspection stickers

Hundreds of industrial plants have found these Kum-Kleen *Removable* Inspection Stickers are far faster, safer and more efficient than string tags, chalk marks, grease pencil, or gummed labels. These pressure-sensitive Kum-Kleen stickers are quickly applied *without moistening*, and they stick-and-stay-stuck to all clean, smooth surfaces, never curl or pop off, yet easily peel off when their job is done. In stock for immediate delivery or available printed to your specifications.

Write for samples ADDRESS DEPT. NED10

AVERY ADHESIVE LABEL CORPORATION **Kum-Kleen**

NEW YORK CITY: 41 Park Row
DETROIT: 3049 East Grand Boulevard
CLEVELAND: 2123 East 9th Street
PHILADELPHIA: Commercial Trust Building
CHICAGO: 608 South Dearborn Street
CINCINNATI: 626 Broadway Street
MONROVIA, California
Representatives In All Principal Cities

For more details circle NED-8082 on enclosed inquiry slip

ACCURACY TO .0001"
FOR TOOL ROOM AND PRODUCTION

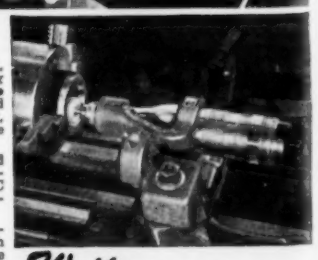
FOR LESS THAN $150

IN PRECISE MOUNTS ON LATHES AND OTHER MACHINE TOOLS, PRECISE GRINDER-MILLERS WITH 1/4 H.P. AND SPEEDS FROM 20,000 TO 45,000 R.P.M. DO THE WORK OF SINGLE-PURPOSE MACHINES COSTING 100 TIMES AS MUCH!

VERSATILITY. For cylindrical, internal, external and form grinding; for milling with H. S. steel or **tungsten carbide** midget mills; for micro-finishing and polishing. Use on wood, glass, rubber, plastics, or any metal including the hardest alloy steel.

DURABILITY. All metal housing, rigid PRECISE quill, lubricant-sealed, micro-precision bearings 1/4 H. P. AC-DC motor (115 volts) is protected by replaceable fusetrons.

ATTACHABLE COOLFLEX SHAFT (optional). Quickly attached for bench work and handtool applications. Same speeds, same precision quill as in PRECISE GRINDER-MILLERS.



Write FOR CATALOG

PRECISE PRODUCTS CO., 1346 Clark St., Racine, Wis.

PRECISE GRINDER-MILLERS

For more details circle NED-8083 on enclosed inquiry slip

69 Mount Vernon Ave., N. W., Grand Rapids 4, Michigan

For more details circle NED-8084 on enclosed inquiry slip

THREAD RESTORER SET
has eight restorer sizes

Rechasing battered or damaged bolt threads is simplified with latest thread restorer set No. TR7. It consists of eight sizes of restorers, ranging from bolt diameter of ¼-in. with 28 threads per inch to ¾-in. bolt diameter with 16 threads per inch. Made by **Bonney Forge & Tool Works**, Green & Meadow Sts., Allentown, Pa.

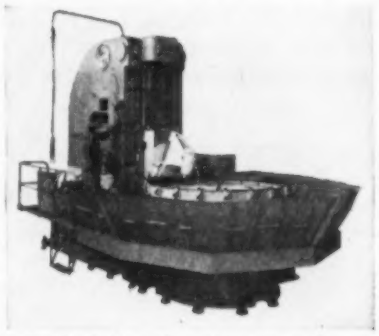
For more details circle NED-8086 on enclosed inquiry slip

INDUSTRIAL STOKERS
low hopper is easily filled

Height of hopper on improved Deluxe commercial model stoker is lower and top is fully open and sloping to permit easier filling and to avoid interference with boiler flue cleaning doors. Hoppers are made in two sizes for use in industrial warm air, steam or hot water systems. Metering type worm takes coal from hopper to fire in "unpacked" condition, allowing easy penetration of air through entire fuel bed. Air required for combustion is supplied by quiet fan and is automatically regulated by Air Volumeter. Hopper has 1000-lb capacity. Coal is burned on air-cooled hearth from which fused residue is easily removed. Worm housing cleanout permits removal of foreign objects without emptying hopper. Made by **Iron Fireman Mfg. Co.**, Dept. N.E.C., 3170 W. 106th St., Cleveland 11, O.

For more details circle NED-8087 on enclosed inquiry slip

GEAR SHAVING MACHINE
for internal & external spur gears



General design of model GCT, 100-in. Red Ring gear shaver includes independently driven rotary work table and column which, moving horizontally, carries cutter head to and feeds it into the work. Cutter head reciprocates in its vertical slide across face of work. Designed for producing both internal and external spur and helical gears with face widths up to 40 in. and pitch diameters up to 100 in., machine is especially applicable to gears used in tanks, power shovels, mine hoists, large speed reducers, stationary prime movers and marine drive units. Shaving is accomplished by universal rotary crossed axes principle with work gear driving cutter as is customary in shaving gears larger than 24-in. pitch diameter. Made by **National Broach & Machine Co.**, 5603 St. Jean Ave., Detroit 13, Mich.

For more details circle NED-8088 on enclosed inquiry slip

Self-contained Normal Duty Roller Type Hold-Back unit (left) mounts readily on conveyor headshaft, as illustrated above.

Loaded Conveyors and Bucket Elevators against Reversals

An S-A NORMAL DUTY ROLLER-TYPE HOLD-BACK gives positive protection against disasterous reversals due to power interruption. Simple, rugged—it permits free rotation for conveying but acts *quickly* and *quietly* to prevent shaft from reversing . . . immediate engagement means no chance of shock. Eliminates runaway loads, flooded feed points and damaged equipment . . . protects personnel.

Write today for complete data . . . request copy of Holdback bulletin.

1901-1951

50 years experience with bulk handling

STEPHEN S-A ADAMSON MFG. CO.

12 Ridgeway Ave., Aurora, Ill. Los Angeles, Calif. • Belleville, Ont.

Designers and Manufacturers of All Types of Bulk Materials Handling Equipment

For more details circle NED-8090 on enclosed inquiry slip

Clean as a whistle

All dust can be eliminated at **Low Cost** *to you*

That common phrase, "clean as a whistle," has a new meaning for me. The American Wheelabrator people and many of their thousands of customers repeatedly have told me about the high efficiency of Dustube Collectors. I decided to talk personally to top management chaps at plants which have Dustube installations.

When I asked, "What kind of job does Dustube do?" the usual reply was, "clean as a whistle!"

It's fun to get pats on the back, so I just have to pass them on to you.

They praised Dustube's high efficiency which is as close to 100% as it is possible to get. They reported a minimum of filter wear due to Dustubes being freely suspended, free from tension, and free from contact with abrading metal surfaces . . . Dustube's simple, speedy, thorough removal of *all* the dust . . . the power savings which add to the total lower operating cost . . . the ease of inspection from the clean air side, with no parts to remove, plus a minimum need for inspection . . . Dustube's faster filter replacement, requiring only a few seconds and no tools.

Ask American Dustube engineers for a solution to your problem. The information will cost you nothing.

Write also for free literature and factual case histories chuck full of helpful dust collection information.

Sincerely,

Fred Deane

DUSTUBE ADVANTAGES

- BETTER DUST REMOVAL
- POWER SAVINGS
- HIGH EFFICIENCY
- EASE OF INSPECTION
- LESS FILTER WEAR
- FASTER FILTER REPLACEMENT

American WHEELABRATOR & EQUIPMENT CORP. 508 S. Byrkit St., Mishawaka 8, Ind.

dustube COLLECTORS

For more details circle NED-8085 on enclosed inquiry slip

SAFETY EQUIPMENT FOR ALL INDUSTRIES

IPCO *Cork Faced* BULLETIN BOARDS

STYLE NO. 440

F.O.B. PHILADELPHIA **$9.00**

A quality bulletin board that may be adopted for general use . . . Manufactured of a specially fabricated cork faced material with a hardwood frame. Cork face is in natural tan color, frame satin-finish stained a slightly darker shade to harmonize . . . Size over all, 27" x 39" . . . A practical answer for office and plant use, institutions, schools, hospitals, commercial establishments and many other locations.

SPECIAL SIZES TO ORDER

Write for Bulletin L-101

IPCO *Safety Equipment for all Industries*

INDUSTRIAL PRODUCTS COMPANY

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BEARING INFORMATION FREE

DATA SHEETS—factual information on bearings and bearing use—are being prepared monthly by Johnson Bronze engineers. They cover bearing types, bearing design, materials, powder metallurgy, lubrication, tests, tolerances, etc. Valuable to design engineers and users of bearings. They are free.

Write today for your set.

SLEEVE BEARING HEADQUARTERS *Since 1901*

Johnson Bronze

580 SOUTH MILL STREET • NEW CASTLE, PA.

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for the RIGHT answers to YOUR alloy fastening problems . . .

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HARPER CAN HELP YOU... because Harper makes them *all*—has fastenings in exactly the *right* alloy, size, type and finish you need. Harper deals exclusively in nonferrous and stainless steel fastenings—bolts, nuts, screws, rivets and accessories in brass, bronze, copper, aluminum, Monel and stainless steel that provide maximum resistance to corrosion, heat, abrasion and stress. Over 7000 items in stock ready for delivery from warehouses and distributors, nationwide. Mail coupon for new catalog.

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The H. M. Harper Company
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Send my copy of new Harper Catalog.
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Name.....

Address.....

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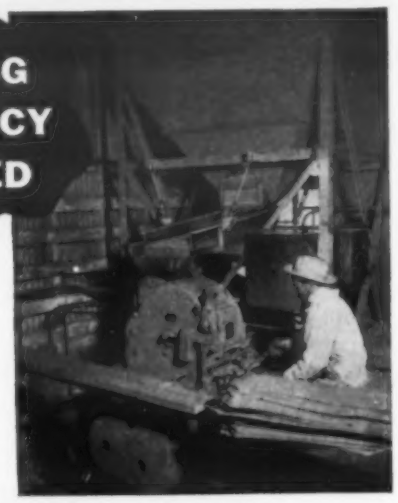
BAGGING EFFICIENCY DOUBLED



This Model F-22 provides a smooth, even, controllable flow of processed fertilizer to bagging machine. Not only speeds up the operation, but greatly reduces spillage and waste.

SYNTRON

VIBRATORY FEEDERS

With Variable Control of Rate of Flow

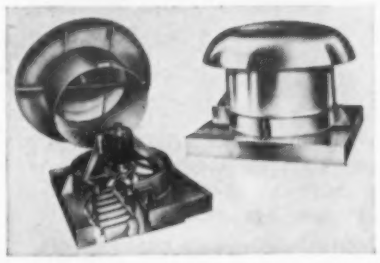
Will handle most types of bulk materials—HOT, COLD, DRY, DAMP, FINE, ABRASIVE, LUMPY—at variably controlled rates from POUNDS to hundreds of TONS per hour—to MIXERS, BELTS, CRUSHERS, BENDERS, PACKAGING MACHINES, SCREENS, OVENS, ETC.—Low maintenance due to ABSENCE OF WEARING PARTS.

Write to—

SYNTRON CO.
405 Lexington Ave. Homer City, Pa.

For more details circle NED-8093 on enclosed inquiry slip

ROOF EXHAUSTER
reversing flow supplies fresh air



Designed for roof ventilating applications, this industrial-commercial power roof exhauster can be used to supply fresh air by reversing direction of air flow. Aerodynamically designed squat mushroom type diffuser head reduces turbulence and discharges losses. Average unit is 2 ft high. Wheels are available in direct or belt drive. Type E airfoil section blades with adjustable pitch are made of steel for large volume and static pressure requirements. Type N and W aluminum alloy blades are for higher pressures. Motor is totally-enclosed, ball bearing type, mounted in air stream. Vibration eliminators support entire assembly. Blade diameters vary from 14 to 48 in., air capacities from 870 to 47,800 cfm and static pressures from ⅛ to 1½ in. Made by **Chicago Blower Corp.**, 4559 W. Congress St., Chicago 24, Ill.

For more details circle NED-8095 on enclosed inquiry slip

ONE-MAN ROTARY SNOW PLOW
powered by 1½-hp gasoline engine

Clearing 16-in. wide path through heavy snow, this rotary snow plow attachment for Jari, Jr. walking power unit quickly cleans walks, driveways and loading areas. Unit is self-propelled, and rotary rake chews snow for easy removal. Adjustable discharge chute directs snow stream to side. Two-wheel drive to rubber tires of tractor provides positive forward motion. Independent clutch permits starting of 1½-hp gasoline engine without load. Made by **Jari Products, Inc.**, 2936 W. Pillsbury Ave., Minneapolis, Minn.

For more details circle NED-8096 on enclosed inquiry slip

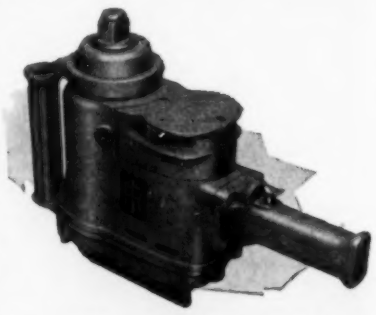
HARDNESS TESTER
applies 50 to 1000 gram loads

Vickers values of small round and flat metal parts, foil, tinplate, glass and plastics can be measured with Isoma Hardness Tester which has automatic weight selecting device for applying dead weight loads of 50 to 1000 grams. Minimum thickness of flat pieces tested is 0.0005-in. and minimum diameter for rounds, from 0.003 to 0.005-in. Built-in optical system permits measuring impressions to within 0.000004-in. Distance between indenter and table is maximum 2-13/64 in. Standard equipment also includes transformer for 110 or 220 v, spare bulbs and equivalent values table. Special supports and clamps for holding thin material and extremely small parts are available. Distributed by **Cosa Corp.**, 616-624 Chrysler Bldg., New York 17, N. Y.

For more details circle NED-8097 on enclosed inquiry slip

NUT-RUNNING TOOL
delivers 900 impacts per minute

Tightening and loosening of stubborn, rusted or frozen nuts is facilitated by heavy duty electric 34U Impactool without kick or twist. Designed for tough nut-running jobs in truck, bus and industrial maintenance fields, tool converts power of its motor into hundreds of rotary impacts whenever sufficient resistance to turning is met. It has 1-in. square driver, and is rated for bolts up to 1¼-in. size. Adjustable handle can be attached in any one of three positions. Handle with trigger switch can also be rotated 180 degrees. Nut-runner weighs 32½ lb and is equipped with heavy duty plug and three-conductor cable. An automotive socket kit is available containing three bolt clearance sockets and two Budd Wheel sockets plus a 6-in. extension. Made by **Ingersoll-Rand Co.**, Dept. F. P., 11 Broadway, New York 4, N. Y.



For more details circle NED-8098 on enclosed inquiry slip

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SPECIALS • SEMS

THREAD CUTTERS • AIRCRAFT

PHILLIPS HEAD SCREWS

In All Cold-Heading Materials

We know what it means when you say, "Our Line is Down."

That's why we specialize in serving production users of *Fasteners* and *Special Parts*.

That's why our technical men are trained to *know your part* all the way through each manufacturing step.

That's why we can assign special machines to your particular problem... to give you the parts and fasteners when you need them.

Camcar believes in *supply* first — because screws, fasteners and special parts serve no good purpose until they have been assembled into your products.

When you need Fasteners or Special Parts...

Telephone 5-9451 or Teletype RK-53

CAMCAR SCREW & MFG. CORP.

601 Eighteenth Avenue, Rockford, Illinois

"Production-Designed FOR YOUR ASSEMBLY LINE"

For more details circle NED-8094 on enclosed inquiry slip

DOWNS SAFETY GRABS ...GRIP ANYTHING!

FOR CRANES AND HOISTS...

Material lifting equipment will do more work—faster, easier—when you have the proper "grabs" for every type of load. No matter what your hoists are handling—pipe, rails, drums, plate or structural steel, stone, timber, boxes or odd-shaped objects of any description—there's a DOWNS *Safety* Grab that will enable you to do it faster, easier *and* safer. Learn new short cuts to greater efficiency for YOUR plant with DOWNS' *complete line* of *Safety* hoist grabs!

Write for Free Illustrated Catalog 200 Today!

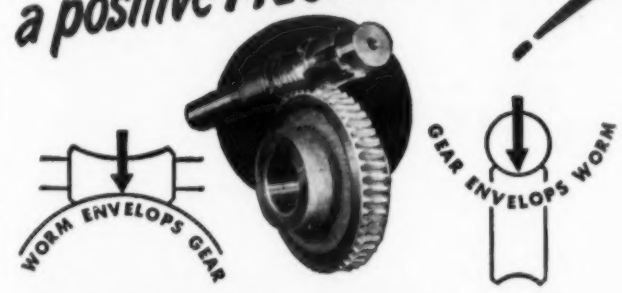
DOWNS CRANE & HOIST CO.

MECHANICAL ENGINEERS

540 W. VERNON AVENUE • LOS ANGELES 37, CALIF.

For more details circle NED-8099 on enclosed inquiry slip

HYDRAULIC smoothness in a positive MECHANICAL drive



Cone-Drive DOUBLE-ENVELOPING gears give you this "hydraulic" smoothness because:

1. Regardless of the number of teeth in the gear, a full ⅛ of the teeth are **simultaneously** in contact.
2. **Every tooth** remains in **continuous** contact while engaged.
3. **Velocity is constant.**

Ask us to tell you more about them

CONE-DRIVE GEARS Division, Michigan Tool Company

DOUBLE ENVELOPING GEAR SETS & SPEED REDUCERS 7171 E. McNichols Road • Detroit 12, Michigan

For more details circle NED-8100 on enclosed inquiry slip

IF IT'S GOOD ENOUGH FOR ULTRA-FINE RADIOACTIVE DUSTS

IT'S IDEAL FOR YOUR MOST HAZARDOUS JOBS

Sectional view of MIKRO-COLLECTOR

SEND FOR—actual sample of felt used in MIKRO-COLLECTOR.

The MIKRO-COLLECTOR* has virtually no rival in the collection of radioactive dusts of ultra-fine particle size. Its installations for this purpose alone, during the past year, have a combined capacity of more than 100,000 cfm.

A MIKRO-COLLECTOR can handle your job economically and efficiently, if it falls in either of these classifications:

1—*Elimination of atmospheric pollution.*
2—*Full recovery of a valuable product.*

This is made possible by the MIKRO-COLLECTOR's pressed felt filter medium and its Hersey reverse-jet cleaning ring, which assure *phenomenal filter rates* and the very highest possible dust recovery.

*Patents applied for by H. J. Hersey, Jr., and Pulverizing Machinery Company

PULVERIZING MACHINERY COMPANY
28 Chatham Road Summit, New Jersey

PRESERVE OUR HERITAGE: FAITH, FREEDOM and INCENTIVE

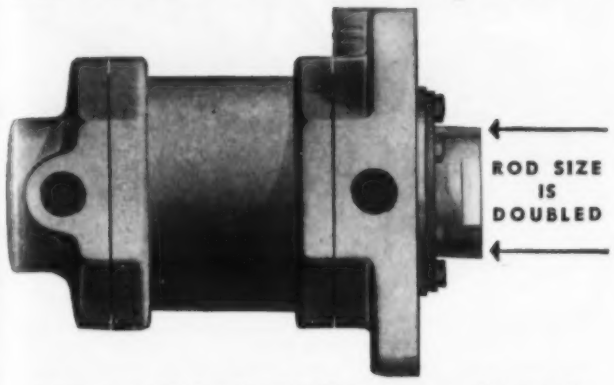
MIKRO-COLLECTOR 100 PER CENT

Reg. U.S. Pat. Off. By the makers of MIKRO-PULVERIZERS and MIKRO-ATOMIZERS

For more details circle NED-8101 on enclosed inquiry slip

RIVETT 2:1 CYLINDERS

Increase Output!



Rivett 2:1 Hydraulic Cylinders have a piston rod about twice the diameter of a standard rod. This reduces displacement, allowing faster retraction. With cycle time shortened, the cylinder accomplishes more work. Saving is made in motor and pump size. Available in 6 mountings, in 10 bore diameters, in strokes up to 96" and with cushioning.

Write for Catalog Section 105

RIVETT LATHE & GRINDER Inc., Dept. NED 10
Brighton 35, Boston, Mass.

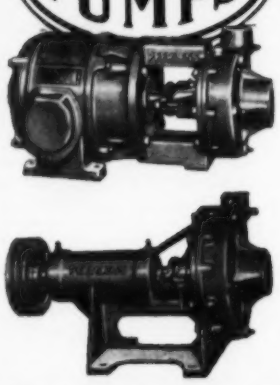
WHEN YOU APPLY HYDRAULIC OR AIR POWER, PLAN WITH **RIVETT**

For more details circle **NED-8102** on enclosed inquiry slip

PEERLESS

OFFERS A COMPLETE LINE OF VERY ECONOMICAL AND EFFICIENT GENERAL PURPOSE PUMPS

PEERLESS PUMPS



ELECTRIC, BELTED AND FLEXIBLE COUPLED DRIVES

HEADS: UP TO 260 FT.
CAPACITY: UP TO 5500 GPM
MOTORS: 1/4 TO 150 H.P.

This complete line of pumps can be usefully, efficiently and economically applied to almost every commercial and industrial service. Two types available: Type PE is a close coupled electric drive utilizing standard pump motors. Type PB provides belt or flexible coupled drive on common base. Both provide excellent efficiencies and good hydraulic characteristics. They are compact, dependable, economical and durable. Easily maintained. Write today for descriptive Bulletin B-2300. Use it as a buyers' guide for general purpose horizontal pumps.

PEERLESS PUMP DIVISION

FOOD MACHINERY AND CHEMICAL CORPORATION

Factories: Los Angeles, California, and Indianapolis, Indiana.
Offices: New York, Atlanta, Fresno, Los Angeles, Chicago, St. Louis, Phoenix; Dallas, Plainview and Lubbock, Texas; Albuquerque, New Mexico.

For more details circle **NED-8103** on enclosed inquiry slip

Backstand Method Saves Time!

Milwaukee Electric Tool Corp. eliminates lengthy operation ...increases production 40%

Problem: The Milwaukee Electric Tool Corp. had a time-consuming method for sanding cast aluminum motor housings for portable electric tools. After polishing with a hard wheel, they sanded with a #46 set-up wheel and finished with a grit #100 set-up wheel. This operation was too long and costly.

Solution: The Milwaukee Electric Tool Corp., switched to the backstand belt for this polishing job.

Result: Now one Armour Backstand Belt does the work of the hard wheel and the #46 set-up wheel — eliminating one operation. A better finish is obtained and production is up 40%!

Manufacturers of hundreds of different industrial and consumer items have proved that the backstand method is more efficient and more economical than the set-up wheel.

If you grind, polish or finish flat or contoured surfaces, stamped, cast or forged pieces, send today for free booklet, "Facts About Backstand Belt Grinding and Polishing."

We recommend buying through your industrial distributor

ARMOUR *Coated Abrasives Division*

SHEETS • ROLLS • BELTS • DISCS

Armour and Company • North Benton Road • Alliance, Ohio

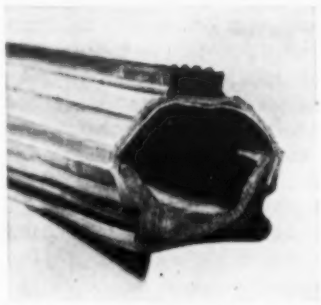
For more details circle **NED-8104** on enclosed inquiry slip

EXPANSION WOOD BIT
cuts 1/2 to 3-in. diameter holes

Clean holes are drilled readily in hard or soft wood with this expansion bit which has one-piece shank. Tool steel blades are adjusted easily for any hole size from 1/2 to 3 in., and positive lock prevents blade slippage. Blade is tilted so that center lip is unnecessary. Self-clearing lead screw is of constant-feed no-loading type. Made by **Robert H. Clark Co.,** Dept. 250, 9330 Santa Monica Blvd., Beverly Hills, Calif.

For more details circle **NED-8105** on enclosed inquiry slip

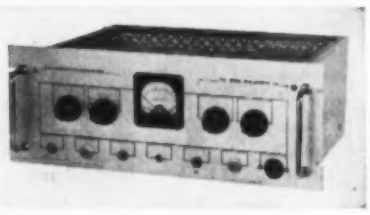
INFLATABLE STRIP SEAL
prevents aircraft air pressure loss



Applicable as weather or water seal, this inflatable strip is built to prevent high altitude blowouts or water leakage when inflated, yet exerts minimum separating force. Special textile fabric, rubber coated on both sides, is vulcanized in collapsed position to a flexible rubber channel type base. Little or no stretching of rubber occurs when inflated to sealing position. Sealing is almost instantaneous, with only a few pounds of pressure being required. Rubber compounds used stay live and resist weather aging. Made by **B. F. Goodrich Co.,** Dept. E, 500 S. Main St., Akron 18, O.

For more details circle **NED-8106** on enclosed inquiry slip

RACK-MOUNTED AMPLIFIER
usable with recording oscillographs



Studies of such static or dynamic conditions as strains, displacements, pressures, light intensities and temperatures are facilitated with this model BL-962 amplifier which is mounted in 19-in. rack having 7-in. high front panel. Voltage gain, approximately 1000 times, is sufficient to give 1 mm of deflection on chart per millivolt input when device is used with Brush magnetic direct-writing oscillograph. Frequency response is essentially linear from direct current to 1000 cycles per second. Panel contains attenuator with five factor-of-ten positions, gain control, calibrating meter and controls for determining input voltages. Provision is made for electrically biasing oscillograph pen to any position on chart. Made by **Brush Development Co.,** Instrument Div. 36, 3405 Perkins Ave., Cleveland 14, O.

For more details circle **NED-8107** on enclosed inquiry slip

DESTROY

CONFIDENTIAL RECORDS, DOCUMENTS, BLUEPRINTS, DRAWINGS WITH

SHREDMASTER

SHREDDING MACHINES

SHRED paper, textiles, rubber, cellophane, aluminum, tin foil and other materials.

Operates — Quietly — Cleanly — Safely. Little maintenance required.
Shredding of confidential records important to plant security.
Shredding your paper and other materials provides more resilient high quality packing material — enables re-use of high cost materials for other purposes.
SHREDMASTERS are selected and used by leading concerns and government agencies.

Three models — for all requirements. *Write for complete information.*

Dept. N. E.—10

THE SHREDMASTER CORPORATION

205 Willoughby Avenue, Bklyn. 5, N.Y.

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THIS Cambridge BELT

. . . in brazing, galvanizing, annealing, tempering or other high temperature installations. Rod-Reinforced construction means highest tensile strength, low thermal capacity, straight belt travel. Open mesh allows free heat circulation or drainage of process solutions.

Regardless of your specific process, there is a Cambridge woven wire conveyor belt to combine movement with processing of parts or materials.
Woven from any metal or alloy to the mesh or weave that best suits your operating conditions . . . heat, cold or corrosive agents . . . Cambridge belts are constructed to rigid specifications based on our experience in your industry. And any Cambridge belt can be equipped with special drive connections, retaining selvages, cleats, or other attachments for your particular process.

FREE CATALOG. Basic reference manual on conveyor design, belt construction and metallurgy. Write today or call your nearest Cambridge office. See "Belting—Mechanical" in your Classified Telephone Directory.

The Cambridge Wire Cloth Co.

See us at the Metal Show BOOTH C-111

Department C
Cambridge 10, Md.

OFFICES IN PRINCIPAL INDUSTRIAL CITIES

For more details circle **NED-8109** on enclosed inquiry slip

MORE SOLD THAN ANY OTHERS

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OF USES AND SPECIFICATIONS

GENERAL
Industrial Pneumatic Tires

..SAVE TIME·LABOR·MONEY

Protect equipment and floors • Reduce Breakage

- ★ *Wide Base Wheel*
- ★ *More Air Volume*
- ★ *More Stability*
- ★ *More Load Capacity*
- ★ *Longer Miles in Hi-Speed Service*

Available separately or in assemblies of Tires, Tubes and Wheels. Size O. D. 8" to 27"—200 to 4000 lbs. cap. for low and high speeds.

THE GENERAL TIRE

Rigid **CASTER FORKS** *Swivel*

Wide-base caster forks engineered to carry heavier loads without adding dead weight to equipment. Available in identical pairs in a wide range of sizes.

Send for Catalog • Dept. 4

THE GENERAL TIRE & RUBBER CO. AKRON, OHIO

For more details circle **NED-8110** on enclosed inquiry slip

JABSCO SELF PRIMING PUMPS

Patented and Patents Pending

the pump with the DUPONT NEOPRENE impeller (oil resistant)

BRONZE, STAINLESS STEEL & IRON CONSTRUCTION —CAPACITY TO 50 GALLONS PER MINUTE

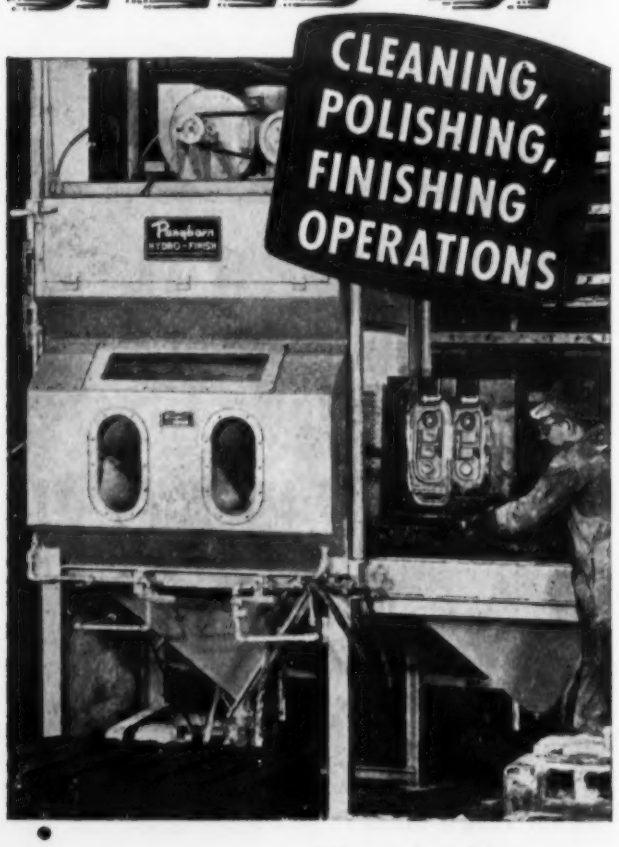
1 **MORE CAPACITY**—for its weight, size and price.
2 **SELF-PRIMING**—starts instantly with high suction lift.
3 **ONE MOVING PART**—tough, long-lived.
4 **GEARLESS**—impeller outlasts metal gears.
5 **TROUBLE FREE**—simple construction.
6 **ECONOMICAL**—low cost—low maintenance.

LIQUID TRANSFER AND CIRCULATING FOR ALL INDUSTRIES

JABSCO PUMP COMPANY
2031 N. Lincoln Street • Burbank, California

For more details circle NED-8111 on enclosed inquiry slip

SPEED UP



Pangborn

Hydro-Finish is versatile! Use it to speed up cleaning, polishing and finishing of molds and dies as well as production line work.

Hydro-Finish saves you time, labor and money. Scale and discoloration are removed in *minutes* instead of hours. Cleaned surfaces are virtually free of directional grinding lines. Costly hand work is greatly reduced. No danger of excessive metal removal because tolerances are held to .0001". Fine mesh abrasives suspended in water do a precision job.

Find out how Pangborn Hydro-Finish improves product quality, increases tool and die life! For full details, write today for Bulletin 1400A to: PANGBORN CORPORATION, 2400 Pangborn Blvd., Hagerstown, Md.

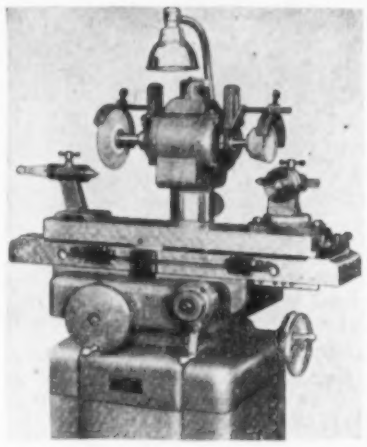
Look to Pangborn for the latest developments in Blast Cleaning and Dust Control equipment.

Pangborn

BLAST CLEANS CHEAPER with the right equipment for every job

For more details circle NED-8112 on enclosed inquiry slip

TOOL & CUTTER GRINDERS offered in four basic models and variety of attachments

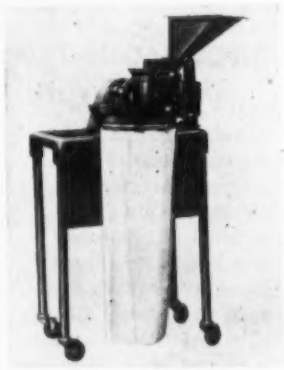


Greater capacities and accuracy, heavier construction and refined lubrication system are found in improved series of universal tool and cutter grinders. Model B800 is basic tool and cutter grinder, model B860 is universal tool grinder with slide-mounted multiple speed head, model B803 is chip breaker grinder, and model B804 is universal carbide tool grinder. Swing over table is 8¼ in. (with 1-in. raising blocks, 10¼ in.), distance between centers 18¾ in., and table working surface is 5¼ x 25¼ in., while subtable surface is 6½ x 30¼ in. Table traverse is 11¾ in.

All shafts are ball bearing mounted and saddle ways have automatic compensation for wear. Fixtures adaptable to grinders include motor driven work heads, tap grinding fixtures, tilt table attachments for forming and sharpening cemented carbide tools, high speed grinding attachments, radial grinding fixtures and diamond dressers. Made by **K. O. Lee Co.**, 1100 First Ave. S.E., Aberdeen, S. Dak.

For more details circle NED-8113 on enclosed inquiry slip

PULVERIZING MACHINE is adaptable to small production, pilot plant and laboratory use



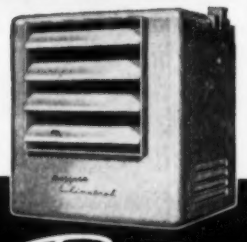
Powered with ¾ or 1-hp motor, Pulvette pulverizer plugs into any lighting circuit. Capacity varies, depending upon fineness of product desired and hardness of material being ground. For example, granulated sugar can be ground at rate of 75 to 100 lb per hour to fineness of 99 per cent through 100-mesh screen. On pilot plant or laboratory work, this machine will produce pulverized product which can be duplicated on production basis on larger, higher capacity pulverizers.

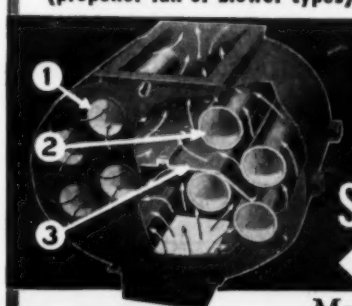
Syntron vibrator on feed hopper and trough assures even flow of material into machine, and feed rate can be adjusted to any desired amount by means of rheostat. Normally furnished in cast iron and steel construction, equipment is available also in stainless steel, bronze, aluminum or other materials to meet needs of service. Smooth grinding chamber is easily cleaned. One-piece rotor has Stellite tipped wearing edges and is reversible for long life. Made by **Pulva Corp.**, 553 High St., Perth Amboy, N. J.

For more details circle NED-8114 on enclosed inquiry slip

Mueller Climatrol

space-saving gas-fired unit heaters
(propeller fan or blower types)





Proof of SUPERIORITY is here

1 **One-piece all-welded steel heat exchanger** — no tie-rod, bolted, gasketed, or slip joints to leak, separate or crack.

2 **Uniform air flow and heat distribution** — burner extends under entire heat exchanger; insures maximum fuel economy.

3 **High Crown Sheet** — no flame impingement, no hot spots.

MUELLER gives you a unit to fit every application — 4 sizes: 60,000, 90,000, 120,000 and 150,000 Btu input capacities. A.G.A. and Underwriters' Laboratories approved — with design features that assure longer life, greater economy. These units are *shipped assembled and pre-wired* for quick, low-cost installation. E-44

Write for full details —

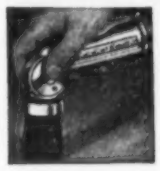
L. J. Mueller Furnace Co.
2041 W. Oklahoma Ave.
MILWAUKEE 15, WISCONSIN

For more details circle NED-8115 on enclosed inquiry slip

NOT WHEN YOU USE IDEAL

Stencil Marking Equipment

IDEAL STENCIL CUTTING MACHINE. Automatic Carriage Return and Word Spacer for fast, accurate stencils . . . visible cutting—see what you're doing . . . Minimum Margin Grip—saves up to 25% on stencil board. Made in three lettersizes.



"HANDY A" ANGLE BRUSH
Natural-grip handle . . . Push-button ink feed . . . one-piece, can't-leak Aluminum body.

IDEAL STENCIL INK
Complete line of black and colored fountain brush and metal marking inks. Free-flowing, quick-drying.

FREE! "IDEAL SHIPPING GUIDE." Valuable shipping dept. tips.

IDEAL STENCIL MACHINE CO.
134 Iowa Ave., Belleville, Ill.

For more details circle NED-8116 on enclosed inquiry slip

This new three-phase Inductrol gives you more kva of regulation in a smaller floor space than ever before possible.

General Electric's NEW INDUCTROLS

(dry-type induction voltage regulators)

will help you get out more production

New improved Inductrols have been introduced this year for both single-phase and three-phase circuits, 600 volts and below. These new dry-type regulators automatically maintain correct voltage on your equipment and do not require expensive fireproof vaults. The attractively styled all-steel cabinets completely enclose all live parts for greater safety. Standard automatic regulators are available for circuits ranging from 3 kva, 120 volts up to 500 kva, 600 volts.

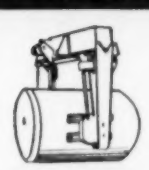
For advice on how, when, and where to apply Inductrols, get in touch with your G-E sales representative or authorized agent.

Write for Bulletins GEC-712 and GEC-795. *General Electric Company, Schenectady 5, New York.*

GENERAL ELECTRIC
404-80

For more details circle NED-8117 on enclosed inquiry slip

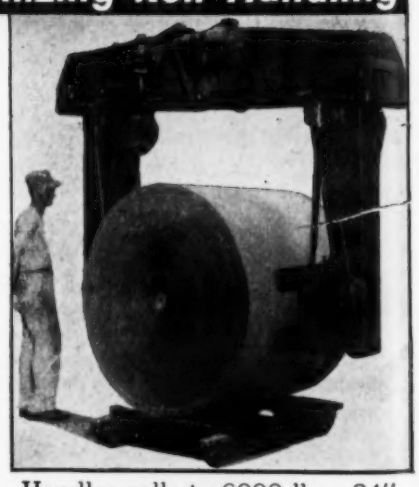
THIS 6000 LB. GRAB is Revolutionizing Roll Handling



KRAFT PAPER

NAPKIN TISSUE

SOUND-DEADENING FELT



Handles rolls to 6000 lbs., 24" to 60" diameter, 72' long. All motions motorized and controlled from crane cab. Turns rolls from vertical to horizontal. Handles various materials without damage.

WRITE FOR BOOKLET 2012 GIVES DETAILS

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6605 East 285th St., WICKLIFFE, OHIO

CLEVELAND TRAMRAIL

For more details circle NED-8118 on enclosed inquiry slip

CORD SETS
That Are Right On The Beam

● Cords, Ltd. engineers and builds standard and special cord sets for any application. Proved dependability.

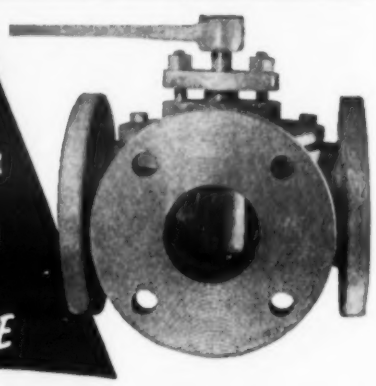
Most comprehensive stock of moulds and dies in existence for production of electronic cords and assemblies.

When you bring your cord problems to us you get the experience of the vast Essex Wire organization, plus integrated production of every component from wire bar to finished assembly. Write for details, explaining application.

WIRE SX PRODUCTS **CORDS LTD.**
DIVISION ESSEX WIRE CORPORATION
121 DODGE STREET, DEKALB, ILLINOIS

For more details circle **NED-8119** on enclosed inquiry slip

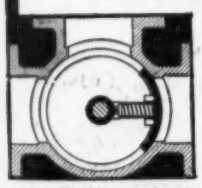
The simplicity of HONEYWELL 3-WAY TRANSFER VALVES will SAVE YOU MONEY and SPACE



THE HONEYWELL transfer valve is a simple, compact valve designed for diverting flow from one line to another—such as cooling water from one condenser to another or oil from one strainer to another. It replaces two conventional valves and fittings. Operates by movement of single lever . . . no chance of opening or closing both lines simultaneously.

Sizes 1½ to 8 inches . . . straight-way or three-way . . . screwed or flanged. Available in high tensile iron with iron or bronze trim; bronze with bronze trim. Other materials and larger sizes on request. Body ratings 125-150 lbs. ASA facing and drilling. Maximum inlet pressures 30 psi to 10 psi. Cost is low . . . act quickly.

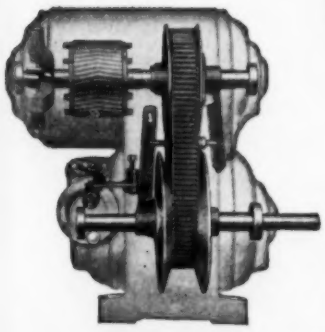
MINNEAPOLIS-HONEYWELL REGULATOR COMPANY, *Industrial Division,* 1912 Windrim Ave., Philadelphia 44, Pa. Offices in more than 80 principal cities of the United States, Canada and throughout the world.



Honeywell VALVE PRODUCTS

For more details circle **NED-8120** on enclosed inquiry slip

power modernization



means perfect speed control

STERLING
SPEED-TROL

OUTSTANDING FEATURES: Infinite speeds—positive speed regulation—fingertip control—large indicator—positive pulleys—no springs—protected—balanced design—streamlined—Herringbone Rotor—through ventilation—shielded ball bearings—versatile mounting—NEMA dimensions—shock absorbing quiet operation—rugged—compact—dependable—long life.

Ask for your copy of Pictorial bulletin No. B-68 showing Sterling Electric Power Drives Turning The Wheels of Industry.

STERLING ELECTRIC MOTORS

Plants: New York 51, N. Y.; Los Angeles 22, California; Hamilton, Canada; Santiago, Chile. Offices and distributors in all principal cities.

For more details circle **NED-8121** on enclosed inquiry slip

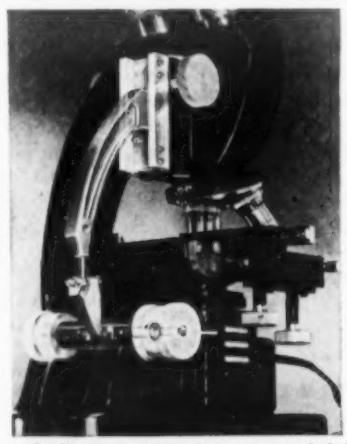
AIR DEHYDRATOR-FILTER dries and cleans compressed air for operating instruments

A dehydrating device, mechanical filter and self-purging trap are combined in single unit in model B Condensifilter. Device removes water, oil, sludge and foreign materials from compressed air used in combustion and process control, soaking pit and blast furnace control, in operating pneumatic tools, sand blast and laboratory equipment and food and chemical agitation equipment. With 15-in. height and 9-in. diameter, dehydrator-filter has capacity of 30 cfm at 100 psi.

In operation, air is admitted through side, directed through condensing section, is dehydrated, then passes through filter. Drop in pressure is less than 2 psi at 100 psi working pressure. Series of copper coils through which cold water flows composes condensing unit which removes water in entrained and vapor states. Filtering unit consists of five hexagonal filter chambers in parallel, each chamber wrapped with seven layers of flannel. It provides over 4 sq ft of filtering area and removes pieces as small as 1.0 to 2.0 microns. Made by **Hankison Corp.,** 331 Renton Bldg, 1501 Beaver Ave., Pittsburgh 33, Pa.

For more details circle **NED-8122** on enclosed inquiry slip

LABORATORY MICROSCOPES ball bearings and rollers assure accurate and positive focusing



Ball bearing on horizontal shaft of low position fine adjustment absorbs thrust and assures effortless turning of focusing knob on Dynoptic Labroscope line of laboratory microscopes. Two rollers on lever transfer horizontal movement of screw to vertical travel of focusing slide. Slide is fitted with ball bearings assembled in pressure plates. Nosepiece also has ball bearings around its outer rim plus a ball stop assuring parcentricity over long use.

Available substage equipment includes variable focus condenser and substage illuminator which can be used integrally with microscope or separately. Optical equipment for instrument embodies longer working distance and nondivisible 10-× achromatic objective. (Also available in various models are 3.5-×, 43-×, and 97-× objectives and 5-× and 10-× Huygenian eyepieces.) Made by **Bausch & Lomb Optical Co.,** 727 St. Paul St., Rochester 2, N. Y.

For more details circle **NED-8123** on enclosed inquiry slip

NEW MASKING METHOD
for SPRAY PAINTING • PLATING • SAND BLASTING

PRE-CUT SELF-STICKING **QUIK-MASKS**

Hundreds of plants now using Brady QUIK-MASKS are saving time and money **by completely eliminating** costly hand work, use of stop-off materials and metal shields. QUIK-MASKS are **pre-cut to the exact size and shape you need.** Protect name plates, machined parts, plated and polished sections, holes, threads, etc., from paint, plating and cleaning solutions, oils, acids and sand blasting.

QUIK-MASKS are pre-cut from special "SCOTCH" brand plating and masking tapes. They stick without moistening—are quickly applied and removed. Circles, squares, rectangles, hexagons, letters and numerals stocked in many sizes. Nameplates and other specials made to your exact requirements.

FREE SAMPLES

DISTRIBUTORS IN OVER 125 PRINCIPAL CITIES

MANUFACTURERS OF SELF-STICKING PRODUCTS
W. H. BRADY COMPANY
1641 E. SPRING STREET • CHIPPEWA FALLS, WIS.

For more details circle **NED-8124** on enclosed inquiry slip

NO MORE CARBON SCRAPING

GUNK DUNK BENCH Carburetor and Parts Cleaning Kit. New 6½ gal. size deep "Vapor-catcher" design pail.

Nothing Decarbonizes and Cleans CARBURETORS, FUEL PUMPS, PARTS *Like..*

New—Improved More Potent*
GUNK HYDRO-SEAL

A WORD OF CAUTION
If it doesn't bear the Genuine GUNK trademark, it may be a partly diluted imitation—and will not give you the Safety and Advantages of Genuine GUNK and should be flatly refused.

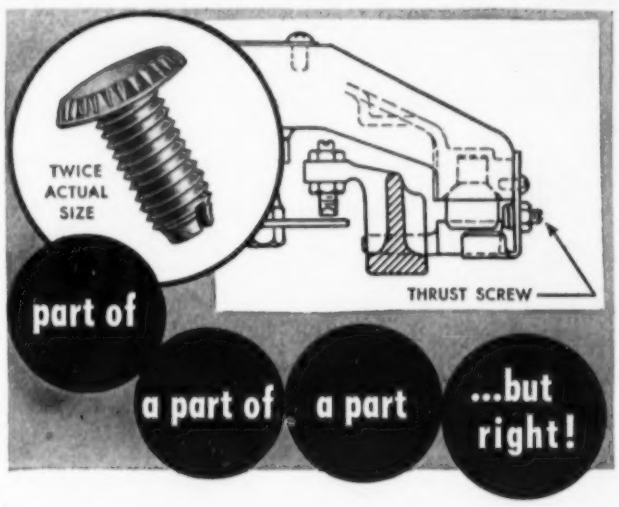
*1. Faster . . . Terrific penetration . . . new improved odor.
2. Quickly digests and removes carbon gum, paint, lead, makes possible accurate visual inspection and fitting of delicate metering mechanisms, jets, orifices and diesel nozzles . . . without etching.
3. Lasts more than one year . . . due to water blanket.
4. Works hot or cold . . . Rinses wet or dry.
5. Patented Double Barrel Performance Guaranteed.

SOLD BY BETTER JOBBERS EVERYWHERE—Write for Name of Nearest Stocking Jobber—Flatly Refuse Substitute Imitations—

IMMEDIATE DELIVERY 1 GALLON OR A TANK CAR

CURRAN CORP. Mfg. Chemists LAWRENCE, MASS.

For more details circle **NED-8125** on enclosed inquiry slip



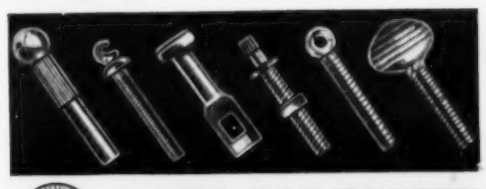
This Progressive-made fastener is one of the many precision parts in the Toledo Scale Company's Guardian Duplex scale. It is used as a thrust screw in the main lever assembly for making fine adjustments.

Hardly a major part, but still it must be right. "Honest Weight" is Toledo's business and precision is required right down to the smallest component.

Manufacturing precision fasteners is Progressive's business, as leading companies well know. If you need a special fastener manufactured in quantity to exact specifications, see Progressive.

WRITE FOR OUR CATALOG
IT MAY SAVE YOU MONEY

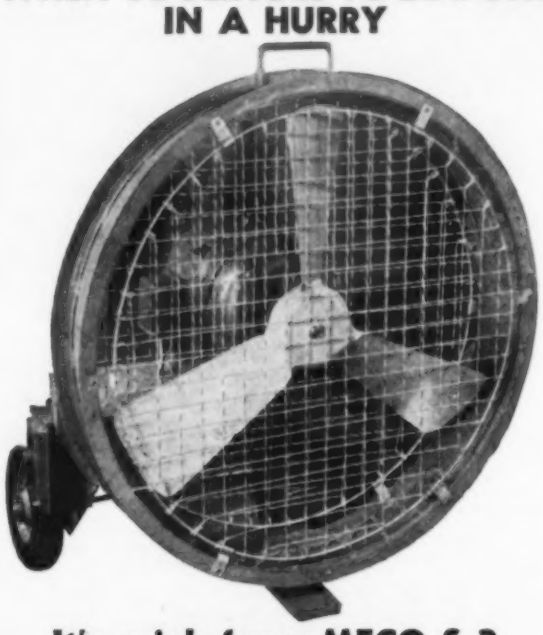
Other typical PROGRESSIVE *"Specials"*



QUALITY PROMCO BRAND
THE PROGRESSIVE MANUFACTURING COMPANY
46 NORWOOD ST., TORRINGTON, CONN.
SALES OFFICES: SAN FRANCISCO, LOS ANGELES, PORTLAND, DETROIT, PHILADELPHIA, CLEVELAND, SEATTLE, BOSTON, SYRACUSE, ST. LOUIS, CHICAGO.

For more details circle **NED-8126** on enclosed inquiry slip

WHEN COOLING IS TO BE DONE IN A HURRY



It's a job for a MECO S-3

This powerful cooling fan is ideal for man and furnace cooling—and has the desirable feature of Quiet Operation.
Surest cure for losses in time and efficiency caused by heat.
Model illustrated rated 16,500 CFM.
Easy to handle, readily spotted wherever it's cooling blast is needed.
Many sizes available. Write for complete information.

THE MANUFACTURERS EQUIPMENT CO.,
218 Michigan Ave. Dayton 4, Ohio

For more details circle NED-8127 on enclosed inquiry slip

HOT MELT PLASTIC COATINGS for GEARS • TOOLS • PRECISION PARTS

BEFORE SECONDS AFTER

Dip

Coated • Protected

DIP-PAK Protect vital, expensive tools, gears, and machined parts during storage and shipping with Fidelity's durable, transparent plastic coatings. Merely melt coating briquette, dip parts, cool. Lasts indefinitely. Tough; abrasive, moisture, rust resistant. To remove, slit, peel. Re-melt, re-use coating. Economical, practical, rapid. Protect parts; save money.

Write for Bulletins and Free Samples
Fidelity Chemical Products Corp.
476 Frelinghuysen Avenue, Newark 5, N. J.

For more details circle NED-8128 on enclosed inquiry slip

ALL INFORMATION, METHODS, AND IDEAS NEEDED TO PRODUCE *BETTER TOOLS AND DIES*

Practical Data on Popular Analyses of Tool Steels, their Selection, Heat Treatment, and Use

in the Revised, Enlarged SIXTEENTH PRINTING of this

TOOL and DIE STEEL HANDBOOK

By Palmer and Luerssen

Here's the BOOK OF ANSWERS for every man responsible for tools and dies. Shows you how to increase your company's production from present equipment—how to reduce toolmaking trial and error, conserve tool steel, avoid die troubles, simplify heat treatment. Gives complete working information on everything from selection of the right steel to heat treating methods and equipment, hardness and toughness testing, latest data on high speed and hot work steels. 564 pages, 355 charts, photos, diagrams give you facts on: how design affects heat treatment, hardenability tests, time required to heat different tools to required hardening and drawing temperatures, furnace atmospheres, quenching, tempering, trouble-shooting.
INCLUDING 80-PAGE ALPHABETICAL SELECTOR, BOUND RIGHT IN THE BOOK, SHOWING WHICH STEEL TO USE FOR ALMOST EVERY TOOL AND DIE. Use this book to train new men and upgrade skilled men.

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Please send me, postpaid, your revised "Tool Steel Simplified". I enclose $2.00 ($2.50 outside U.S.A.) in full payment of the book.
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FIRM NAME_____
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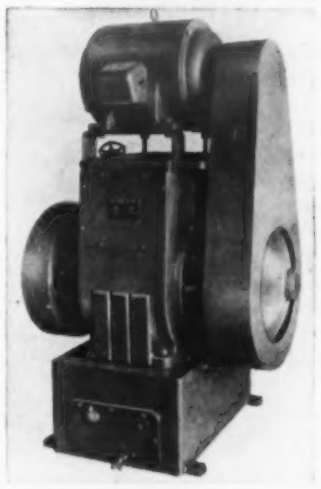
CITY_____ STATE_____
(Please print)

For more details circle NED-8129 on enclosed inquiry slip

SELF-CONTAINED PUMP for high-vacuum processing



Model 812-F Microvac pump with capacity of 500 cfm and operating speed of 390 rpm is suitable for most any type of vacuum processing work. Unit is water-cooled with top-mounted 25-hp motor. It stands 76 in. high, weighs 2400 lb and occupies 36 x 38 in. of floor space. Due to complete discharge of air at each stroke, with no chance for re-expansion, high volumetric efficiency is realized. Oil reservoir is located in pump base where lubricants settle when pump is shut down and vacuum is broken. Oil flows automatically to all parts when pump is started and liquid slugs are discharged without injury to the machine. Made by **F. J. Stokes Machine Co.**, 5900 Tabor Rd., Philadelphia 20, Pa.

For more details circle NED-8130 on enclosed inquiry slip

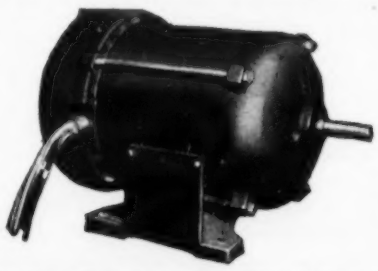
ELECTRIC LIFT TRUCK platform is narrow for special uses

To suit special applications Load-Mobile electric lift truck is equipped with lifting platform only 18 in. wide and can be furnished in 6, 7, 9 and 11-in. lowered heights to engage conventional platforms. Spring mounted stabilizing casters on each side of unit prevent tilting around sharp turns. Truck is battery-operated and features three-way operating position for safety, comfort and maneuverability. Wheels are of large capacity with cushion tires and sealed ball bearings. With conventional width platforms truck can handle double-faced pallets, or operate as freight, pick-up, or fork truck. Made by **Market Forge Co.**, 54 Garvey St., Everett 49, Mass.

For more details circle NED-8131 on enclosed inquiry slip

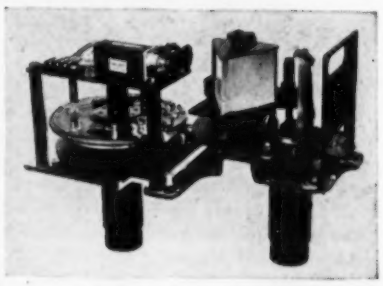
TOTALLY ENCLOSED MOTORS are of fan-cooled capacitor type

Maximum protection with minimum space requirements is provided in line of single-phase capacitor Tri-Clad motors of totally enclosed fan-cooled type by design which has starting capacitors and switch mounted within the frame. Developed for use where severe conditions of dirt, grit or moisture are encountered, motors are available in 1, 1½, 2, 3 and 5-hp ratings. They are also offered in explosionproof and dust-explosionproof constructions for installation in hazardous locations. Cast iron frame, cast aluminum squirrel-cage rotor and long-life ball bearings are standard. Motors operate on 115/230-v 60-cycle ac, except largest size which uses 230 v only. Made by **General Electric Co.**, Schenectady 5, N. Y.



For more details circle NED-8132 on enclosed inquiry slip

OPTICAL INSTRUMENTS equipment for infrared studies

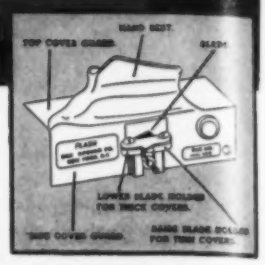


Replacement of various prisms for infrared studies in different spectral regions is possible with illustrated prism interchange assembly for model 21 double-beam infrared spectrophometer. Prism, its table, Littrow mirror, wavelength and slit cams and wavelength counter are mounted on separate assembly. For interchange, whole assembly is removed and alternate installed. Repositioning is determined by Littrow mirror bearing and cam shaft bearing. Also available is densitometer attachment, not shown, which permits accurate routine quantitative infrared reading to plus or minus 0.025-per cent in either transmittance or absorbance. This instrument is for attachment to model 12-C infrared spectrometer. Both products made by **Perkin-Elmer Corp.**, Danbury Rd., Norwalk, Conn.

For more details circle NED-8133 on enclosed inquiry slip

Amazing FLASH BOX OPENER

Opens Any Carton Quicker . . . Cleaner



Exclusive patented blade holder adjustable to varying thicknesses of carton covers.

THE ONLY CARTON OPENER THAT GIVES YOU ALL THESE ADVANTAGES:

Penetrates exactly under the outer cover thickness • Protects contents of carton • Cuts clearly to permit re-use • Prevents accidents • Saves time • Eliminates fatigue. *Already accepted by leading industries.*

Retail Price **$1.75**

FLASH BOX OPENER CO., Inc.
52 W. Houston St. • New York 12, N. Y.

For more details circle NED-8134 on enclosed inquiry slip

THEY CUT AND CUT AND CUT

Every **JOHNSON**

METAL CUT-OFF BAND SAW

is a BEAR for WORK and Lasts Indefinitely

MODEL J cuts 10" rounds, 18" flats. Available as a wet or dry-cutting machine.

When you buy a Johnson Band Saw you can be sure it will stand up and deliver constant service year after year. Johnson Saws are ruggedly built from the best standard parts available. They are adaptable to any cutting job, requiring only a minute's time to change from light to heavy stock. For extra capacity, accuracy, speed and economy, insist on a Johnson with its many outstanding features.

MODEL B smaller machine shown at right . . . Does a man-size job. Cuts 5" rounds, 10" flats. Furnished with or without casters. Really portable, can be taken anywhere for on-the-job cutting.

THERE IS A DEALER NEAR YOU

JOHNSON MANUFACTURING CORP.
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CLEVELAND Top Quality FASTENERS

Send blue prints and specifications of your specially designed parts to
THE CLEVELAND CAP SCREW COMPANY
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"M-B" Model HD-CR
40,000 RPM
HEAVY DUTY Pneumatic
GRINDER

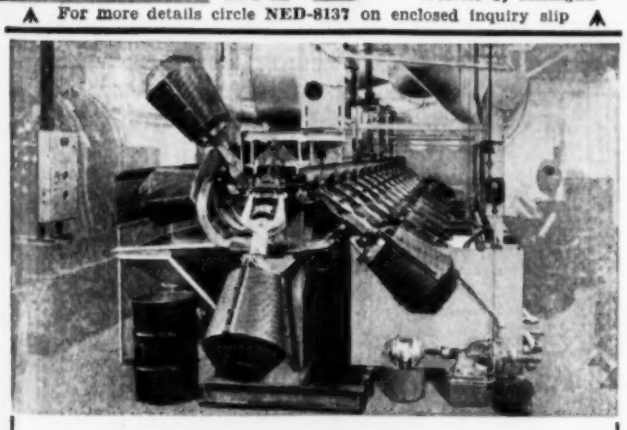
A powerful, versatile tool—can be fitted with three different spindle noses to handle mounted wheels with ¼" diameter shanks, also unmounted wheels with ¼" diameter and ⅜" diameter holes. Made with compound rotors, an abundance of power. Fitted with steel body, a real safety feature. Special grease-sealed bearings, no lubrication required. Speed such as to operate Tungsten Carbide burrs, Rotary Files, etc., to their full efficiency.

Write for Literature

Also Other Pneumatic Grinders • Automatic Air Line Filters and Lubricators

M·B PRODUCTS
46 Victor Ave.
Detroit 3, Michigan

For more details circle NED-8137 on enclosed inquiry slip



Presenting

THE NEW STEVENS SUPER "E" FULL AUTOMATIC BARREL PLATING MACHINE

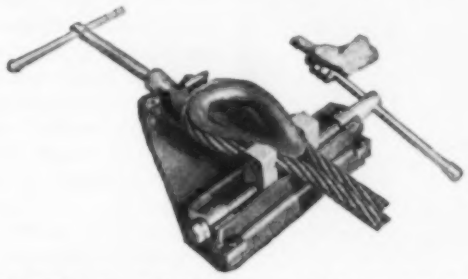
Imagine one man processing 16,000 pounds in eight hours! That is what this new Stevens plating machine can do for you. Like the famous Stevens Model "C," the new Model Super "E" can be used for Cleaning, Pickling, Plating and Drying—and it will automatically unload the processed parts. All you do is load it—manually or automatically.

Designed primarily for the plating and finishing of bulky metal parts in large volume, the Stevens Super "E" will bring important savings to your operations. Low cost per piece or pound is immediately evidenced. Ask your Stevens representative for details or write *Frederic B. Stevens, Inc., Detroit 16, Mich.*

For more details circle NED-8138 on enclosed inquiry slip

CABLE RIGGING VISE handles ⅜ to 1½-in. cable

Forming and holding of wire rope and cable in desired positions can be done effectively with McDermott Riggers' forming vise. It saves considerable time in forming wire



rope and cable around thimbles or fixtures prior to splicing or installation of U-clamps or clips. Vise handles ⅜ to 1½-in. wire rope and cable without adapters, and is used by steel manufacturers, railroads, building and road contractors, shipping and oil industries as well as logging and lumber industries. Made by **Big Four Machine & Supply Co.,** 1013-14 Hales Bldg., Oklahoma City, Okla.

For more details circle NED-8139 on enclosed inquiry slip

MOISTURE TESTING INSTRUMENT shows conductivity of "hot sticks"

Moisture content of "hot sticks" or hot line tools used by electrical workmen in pulling aside or securing charged wires and lines can be checked with moisture register model SK. Equipped with narrow electrode designed for hot line tools and other wood samples of small diameter, instrument has no needles to mar wood surface. Moisture content readings from 25 per cent to zero can be made in three seconds by pressing button. Register weighs 5 lb and is easily portable. Made by **Moisture Register Co.,** Dept. NED, 1510 W. Chestnut St., Alhambra, Calif.

For more details circle NED-8140 on enclosed inquiry slip

VACUUM TUBE ELECTROMETER provides high input impedance

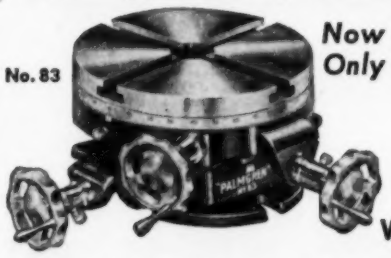
Increased accuracy, achieved by recalibration of scale to compensate for nonlinear characteristics of vacuum tubes, is feature of improved model 200 vacuum tube electrometer. Instrument is accurate within 1 and 5 per cent at full and low-scale readings, respectively. A self-contained direct current voltmeter with high input impedance, electrometer is currently used to measure voltages of charged capacitors, piezo-electric potentials, direct current amplifier and frequency modulation discriminator potentials, and to measure extremely low currents in photocells and dielectric leakages. Made by **Keithley Instruments,** 3868 Carnegie Ave., Cleveland 15, O.

For more details circle NED-8141 on enclosed inquiry slip

DUAL CROSS and ROTARY FEED

PALMGREN

Rotary, Index, Milling Table



No. 83

Now Only $54.50

Turns Your DRILL PRESS Into A VERTICAL MILLER

Think what this will mean in your shop! Can be used on any Drill Press, Lathe or Milling Machine and provides what is practically a universal milling machine.

Designed for use in all types of metal and woodworking shops. A precision table permitting fine work to close tolerances. It is accurate, speedy, well constructed and attaches quickly in a firm position.

Rotary feed calibrated in degrees; Cross feed in thousandths; Dual Cross Slide with cross feed 2⅛" each side of center or 4¼" overall. Has acme thread cross feed screws, adjustable gibs on cross slides. 40 to 1 worm and gear ratio in rotary feed. Equipped with bolt slots and locking screws.

No. 83 Table Dia. 8", T-Slots ⅝", Base Keyway ⅜". Base Dia. 6¼", Ht. 5", Wt. 37 lbs. Price Only $54.50. Other Types available, No. 82 Dual Cross Feed only $43.75; No. 86 Rotary Feed Only $46.75.

Order Today! If dealer can't supply, write us. Ask for Circular No. 354

CHICAGO TOOL and ENGINEERING CO.
Mfrs. of PALMGREN PRODUCTS Since 1918
8378 South Chicago Ave. • Chicago 17, Ill.

For more details circle NED-8142 on enclosed inquiry slip

Save floor space, cut welding time for more production at lower cost...

use P&H AC Arc Welders with exclusive Dial-lectric remote control

Give yourself more room for your production needs. Mount your P&H Welder off the floor, out of the way.

Dial-lectric remote control lets your operator turn the heat on *at the work.* Turns his "walking time" into *welding* time for increased output.

Get these additional advantages: easy, quick-start arc; no arc blow; no moving parts to cause delays and maintenance expense.

P&H WELDING DIVISION
4537 W. National Ave.
Milwaukee 14, Wis.

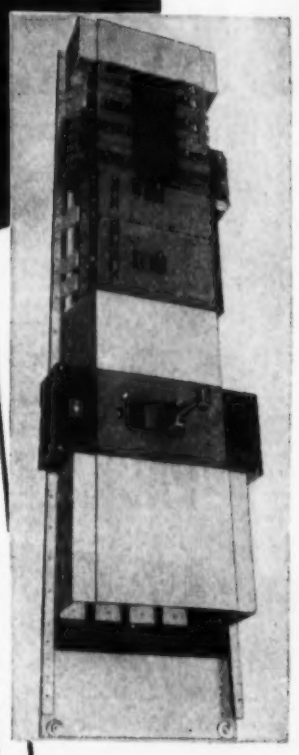
HARNISCHFEGER CORPORATION

P&H AC Welders are NEMA rated and available in a full range of sizes up to 625 amps. See your P&H representative for full details.

2257-A

For more details circle NED-8143 on enclosed inquiry slip

PICK YOUR CIRCUIT BREAKER FROM THE COMPLETE I-T-E LINE



125-600 volts a-c
125-250 volts d-c
10-600 amperes continuous
5000-25,000 amperes interrupting
1, 2, or 3 pole

I-T-E has a *full line* of molded case circuit breakers to meet your every need. Safe, dependable overcurrent protection is provided for every installation. Specify these breakers in panelboards, switchboards, load centers, and individual enclosures. Feature for feature, you get more when you order I-T-E Molded Case Circuit Breakers.

100 ampere F frame breaker in NEMA Type 1-A enclosure

For help in choosing the right circuit breaker from the full I-T-E line, write for Bulletin 5004D and Catalog Section 5000. Or call your local I-T-E representative. He will be glad to help you.

Modern, efficient I-T-E Molded Case Circuit Breakers offer you these benefits:

1. Greater clearance between phases
2. Enclosed terminals for greater safety
3. Uniform construction on 1½" pole centers
4. Time saving, extra-safe drawout terminals
5. External instantaneous trip adjustment
6. Internally mounted special features

I-T-E R&IE

MOLDED CASE CIRCUIT BREAKERS

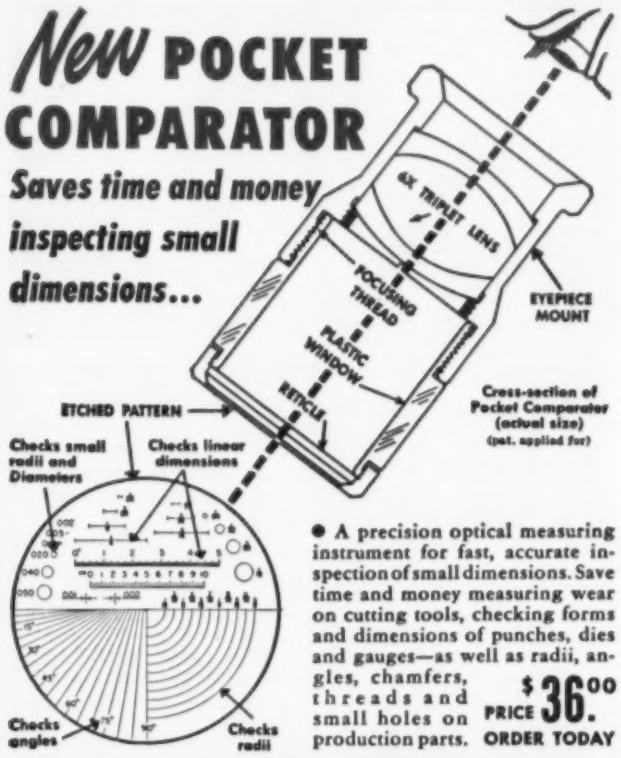
Approved by Underwriters' Laboratories, Inc.

I-T-E CIRCUIT BREAKER COMPANY
19th and Hamilton Streets
Philadelphia 30, Pa.

For more details circle NED-8144 on enclosed inquiry slip

New POCKET COMPARATOR

Saves time and money inspecting small dimensions...



● A precision optical measuring instrument for fast, accurate inspection of small dimensions. Save time and money measuring wear on cutting tools, checking forms and dimensions of punches, dies and gauges—as well as radii, angles, chamfers, threads and small holes on production parts.

PRICE $36.00 ORDER TODAY

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PACKAGE in Clearsite Plastic Selling Containers

Drills and tools, industrial jewels, taps and dies, screws, springs, nozzles, valves, fine machine parts, fishing tackle, electrical parts, and many, many others can be packaged for perfect visibility and the utmost in protection in the container that's featherlight (¼ the weight of glass) • shatterproof • flexible or rigid • permanently printed • clear or opaque in all colors • eventually a re-use container.

Write for your FREE copy of the new, fully illustrated brochure that points up the many uses and advantages of Clearsite Plastic SELLING Containers.

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AMERICA'S #1 SOURCE FOR PLASTIC CONTAINERS
ESTABLISHED 1919

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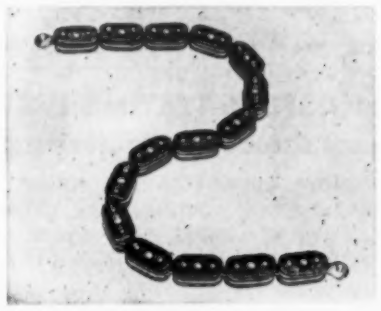
CARBIDE CUTTER SETS for variety of applications

Designed to meet broad range of applications, each of four all-purpose rotary carbide cutter sets offers from 5 to 12 shapes suitable for various types of burring, light milling, blending and finishing. Convenient to use, tools are supplied in plastic container. Tool sizes in various sets include ¼-in. bodies on ¼-in. shanks, ⅛-in. bodies on ⅛-in. shanks and ¼-in. bodies on ⅛-in. shanks. Made by **M. A. Ford Mfg. Co.**, 732 W. River St., Davenport 11, Iowa.

▲ For more details circle **NED-8147** on enclosed inquiry slip ▲

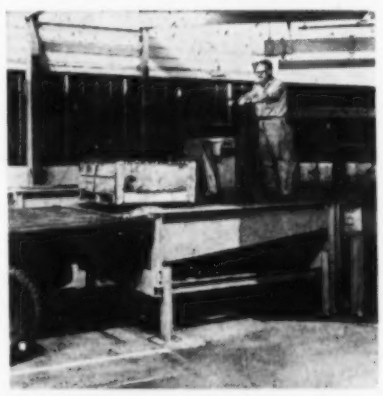
LINK V-BELTING offered in A, B, C, and D belt sizes



Leather link construction of double-faced V-belting combines high power transmission performance of leather with long life on serpentine, spool drum and small-pulley short-center drives. Each link consists of two fiber sections faced with oak-tanned leather. Steel connectors assure flexibility and eliminate stretch. Leather segments provide double bevel which conforms to standard V-belt sheaves. On straight drives, belt can be turned over, practically doubling its service life. Made by **Graton & Knight Co.**, 325 Franklin St., Worcester 4, Mass.

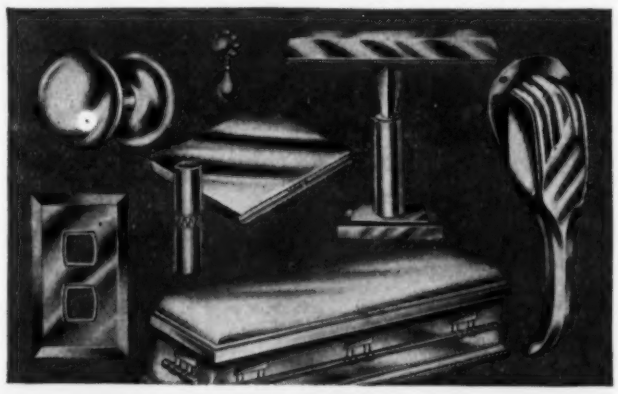
▲ For more details circle **NED-8148** on enclosed inquiry slip ▲

TRUCK LOADING RAMP elevates by electric-hydraulic power



Self-contained and adjustable to any desired height, loading ramp can be set into or adjacent to existing loading platform. Pump driven by 110-v motor supplies hydraulic power to cylinder. Ramp is adjustable through 24 in. so that it meets truck height. It rides with truck during loading or unloading because of spring counterbalancing. Standard 6 x 8 ft and 8 x 8-ft sizes are available, and legs can be supplied in any desired height to match that of loading platform. Fingertip control lever raises or lowers ramp from normally level position. Made by **Green-Penny Co.**, 421 E. Washington Blvd., Los Angeles 15, Calif.

▲ For more details circle **NED-8149** on enclosed inquiry slip ▲



NOW...simulate copper, brass, bronze with M&W PLATELUSTRE

Apply a coating of the new PLATELUSTRE finishes to zinc or steel—and you wind up with products closely resembling copper, brass or bronze. Whether you have been using copper and its alloys for *making* products or for *plating* them, these finishes will help solve your problem.

Air-drying and baking types. Ask for free literature—or have an M & W Technical Service Engineer demonstrate PLATELUSTRE right in your own plant.

PIONEERS IN PROTECTION

MAAS & WALDSTEIN CO.

MID-WEST DIV.-1658 CARROLL AVE., CHICAGO 12, ILLINOIS
PACIFIC COAST DIV.-SMITH-DAVIS CO., 10751 VENICE BLVD., LOS ANGELES 34, CAL.
MANUFACTURERS OF INDUSTRIAL FINISHES

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FREE TRIAL SHOWS HOW!

SHAKEPROOF T. M. REG. U. S. PAT. OFF.

"SPEED-NUTS*"

SAVE TIME . . . REDUCE COSTS!

Designed to clip quickly and easily in place, SHAKEPROOF "SPEED NUTS" eliminate costly riveting, staking or welding operations. Light weight and easy handling speeds assembly.

SEND FOR FREE TEST KIT NOW!

*T. M. REG. U. S. PAT. OFF. BY TINNERMAN PRODUCTS, INC.

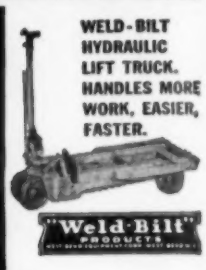
SHAKEPROOF inc.

"Fastening Headquarters" TRADE MARK

A DIVISION OF ILLINOIS TOOL WORKS
2501 North Keeler Avenue, Chicago 39, Illinois

▲ For more details circle **NED-8151** on enclosed inquiry slip ▲

Take an EXTRA Profit *with* Weld-Bilt *Experience in* Materials Handling!



WELD-BILT HYDRAULIC LIFT TRUCK. HANDLES MORE WORK, EASIER, FASTER.

"Weld-Bilt" PRODUCTS

One Midwest manufacturer saved $90,000 on equipment cost alone because he called in a Weld-Bilt engineer FIRST, before deciding on expensive special-design units recommended to solve a difficult handling problem. Our engineer, experienced in cost-saving shortcuts, showed how simple adaptation of more standard equipment could do the job even better.

This is the kind of service you can expect from WELD-BILT . . . a thorough analysis of your problems based on years of varied experience and wide knowledge, of handling problems . . . then a recommended solution that will do YOU the most good — in time and labor savings, in product protection, production speed-up — at the lowest cost. It may involve adapting standard equipment, custom-engineering new equipment — or merely realigning your present operations.

Call in the WELD-BILT Materials Handling Engineer for an economical solution to your problem today. You'll probably save money.

WEST BEND EQUIPMENT CORP.

311 Water St., West Bend, Wis.

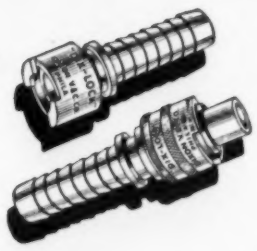
MATERIALS HANDLING ENGINEERS

Portable Elevators • Pallet Trucks • Single Stroke Lift Trucks • Two-Wheel Trucks • Platform Trucks • Skid Platforms.

▲ For more details circle **NED-8152** on enclosed inquiry slip ▲

"DIX-LOCK"

Quick-Acting, Streamlined AIR HOSE COUPLING



A modern, efficient coupling for all factory and field air lines up to ¾". Made of rustproofed steel or bronze. Light weight, yet strong and durable. Snaplock action . . . quarter turn against spring tension; reverse quarter turn to unlock. Hose ends; male and female I.P.T. ends. Completely interchangeable.

From Your Hose Supplier or Industrial Distributor

DIXON VALVE & COUPLING CO.

PRODUCERS OF *The Quality Line* COUPLINGS • NIPPLES • MENDERS • CLAMPS
"BOSS" "GJ-BOSS" "DIXON" "KING" "AIR KING" "DIX-LOCK"
PHILADELPHIA, PA. BRANCHES: CHICAGO • BIRMINGHAM • LOS ANGELES • HOUSTON

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New!

TRIPLE RANGE LONG SCALE "STANDARD" MEGOHMER INSULATION TESTERS

FOR HEAVY DUTY SERVICE WITH

- Constant Pressure, slip clutch generator, 500 volts or 1000 volts.
- True ohmmeter movements independent of generator voltage.
- Ranges: 1000/100/10 megohms or 2000/200/20 megohms.
- Long 3¾" scale with a total of about 8" of scale markings by means of triple range feature.
- Teakwood cases which for strength and durability have no equal.
- IMMEDIATE DELIVERY
- ATTRACTIVELY PRICED.

CATALOG NO. 724
500 volts.
1000/100/10 megohms.

CATALOG NO. 725
1000 volts.
2000/200/20 megohms.

CATALOG NO. 723
1000 volts.
1000/100 megohms.

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500 volts. 200 megohms.
10,000 ohms.

Write for Bulletins Nos. 455 and 1248

HERMAN H. STICHT CO., INC.
27 PARK PLACE NEW YORK 7, N. Y.

For more details circle NED-8154 on enclosed inquiry slip

IDEAL METAL CUTTING SAW FOR YOUR SHOP!

Kalamazoo BAND SAW

A veritable workhorse in any shop. Cuts bars, angles, tubes, pipe and rounds with no burr, minimum kerf. Works fast, smooth, and accurately. Uses standard 1/3 HP 110/60/1 motor. Complete portable. Write for details on this low cost metal cutting saw.

Model 610-S. Capacity 6" round, 6" x 10" flat. Coolant equipment available.

MACHINE TOOL DIV. Kalamazoo TANK and SILO CO.
1044 HARRISON ST., KALAMAZOO, MICH.

For more details circle NED-8155 on enclosed inquiry slip

300 Bends Per Hour

with NEW Semi-Automatic

PINES BENDING MACHINE

SAVES TIME, CUTS COSTS ON SHORT RUN, PRODUCTION, MAINTENANCE WORK

SPECIFICATIONS
PINES SERIES 1400 BENDER

- Maximum Capacity—1" O.D. 16 ga. steel tube.
- Maximum Radius of Bend—8½" to centerline.
- Length of Tubes—Up to 5 ft. standard.
- Bending Speed—29 R.P.M.
- Working Height—35".
- Overall Size (Floor Space)—3' x 7'.
- Pressure—1000 P.S.I.
- Pump Motor—3 H.P.
- Pump—7 G.P.M. (Vickers).
- Optional—Adjustable gages . . . provision for any length of tube, mandrel for critical bends.

Fast, Easy to Operate—Forms Smooth, Neat Bends Quickly

Eliminates many slow, tedious hand bending operations. Is especially designed to cut costs on work formerly considered too variable for fully automatic equipment. Fast and easy for one man to operate. Hydraulic bending arm forms smooth, neat-looking bends quickly. Clamp and die rollers (or sliding dies) are operated by hand toggle levers. Hand wheel provides immediate angle-of-bend selection. *Typical production:* 300 bends per hour on 1"-16 gage steel tube.

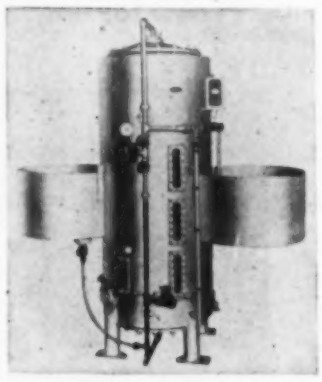
Ask for An Analysis of Your Bending Problems

Write today for free literature. Find out how a Pines Bender can be applied to your work. *Ask for an analysis of your bending problems.* There's no obligation.

PINES ENGINEERING CO. Inc.
640 WALNUT AURORA, ILLINOIS

For more details circle NED-8156 on enclosed inquiry slip

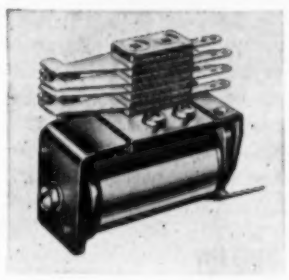
WATER DEMINERALIZER
removes virtually all minerals



Cation and strong base anion exchangers are mixed in single unit tank of Mono-Bed demineralizer which produces water with mineral content of virtually zero in one pass through unit. Resistances have been reported as high as 20 million ohms per centimeter. Demineralizers can be used for various industrial operations, including mirror plating, electronic and anode tubes and photographic finishing where high purity mineral-free water is required. Models are available in flow rates ranging from few gallons to 5000 gph and up. Made by **Penfield Mfg. Co.,** 19M High School Ave., Meriden, Conn.

For more details circle NED-8157 on enclosed inquiry slip

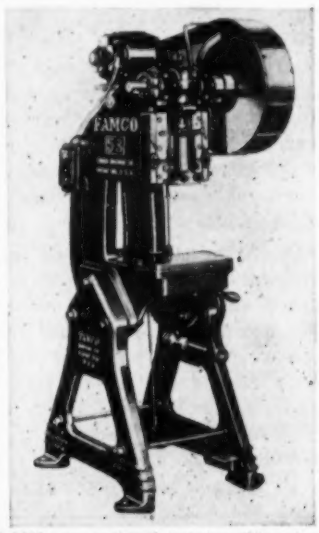
SMALL RELAY
improved model is more sensitive



Increased sensitivity and operating range are features of type KX relay which offers refinements of previous type K. Slightly longer coil can be safely wound to maximum resistance of 8000 ohms. Slight design and armature suspension changes permit this additional winding space without adding materially to overall length. Type KX relay is interchangeable with type K. Size of unit is 1 39/64 x 1 x 1 15/32 in. Dimensions vary with type of coil terminal used, illustrated model having maximum height with eight springs. Weight is 2 oz, coils are single or double wound, operating voltage is to 175 v dc and armature is single or double arm. Form A to C contact arrangements are available. Made by **C. P. Clare & Co.,** 4719 W. Sunnyside Ave., Chicago 30, Ill.

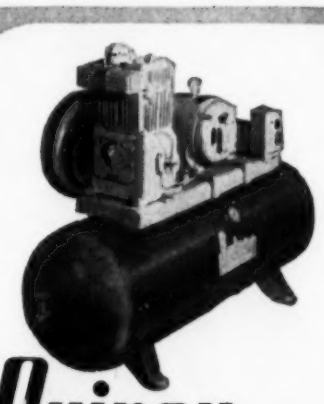
For more details circle NED-8158 on enclosed inquiry slip

POWER PRESS
open back unit is inclinable



Rated in 5 and 8-ton capacities, five deep-throat models are being added to line of open back, inclinable power presses. Machines will take work 20 and 24 in. in diameter. Four shut heights from 6 to 13 in. with up to 3-in. strokes are incorporated. Other presses in line consist of seven models with from 3 to 7½ ton capacities. Made by **Famco Machine Co.,** 1343 Eighteenth St., Racine, Wis.

For more details circle NED-8159 on enclosed inquiry slip



LET Quincy COMPRESSORS meet your air requirements

There is a complete range of Quincy Compressors available in sizes from 1 to 90 c.f.m. Quincy Compressors are designed for maximum efficiency and dependability. Quincy manufactures a complete line of both air and water cooled units in a variety of mountings. Write today for details and latest prices. Quincy Compressor Co., Dept. NE20, Quincy, Illinois.

QUINCY COMPRESSOR CO., Quincy, Illinois
Branch Offices: New York • Philadelphia • Chicago
St. Louis • Dallas • San Francisco

For more details circle NED-8160 on enclosed inquiry slip

OPEN STEEL FLOORING

If you are planning a new building, or of modernizing old walking surfaces indoors or out, look into the advantages of open steel flooring . . . the versatile flooring . . . now! New catalog illustrates and describes wide range of modern applications, its safety features, strength, simplicity of installation and maintenance. Send for a copy.

NEW FREE IDEA-BOOK
write today
OPEN STEEL FLOORING INSTITUTE, INC.
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Pittsburgh 22, Pa.

MEMBERS
These Manufacturers assure top quality engineered grating.
BORDEN METAL PRODUCTS CO. Elizabeth, N. J.
HENDRICK MANUFACTURING CO. Carbondale, Pa.
IRVING SUBWAY GRATING CO., INC. Long Island City, N.Y.
STANDARD STEEL SPRING CO. Gary, Indiana
WALTER BATES CO., INC. Joliet, Illinois
THE TRI-LOK COMPANY Pittsburgh, Pa.
BLAW-KNOX COMPANY, Pittsburgh, Pa.

For more details circle NED-8161 on enclosed inquiry slip

TEST IT FREE! Samples of VELLUM are yours for the asking. Send for this kit today.

Write on your company letterhead for sample kit, sent without obligation

Ageproof VELLUM

Permanently super-transparent AGEPROOF makes better prints now, or years from now

This is the famous Dietzgen vellum that combines a perfect drafting surface with perfect reproduction qualities. And AGEPROOF VELLUM cannot turn yellow, become brittle or lose transparency with age.

Plasticized through and through, AGEPROOF VELLUM contains no oil, no wax to bleed, become rancid or turn color. Because the plastic transparentizing agent permeates every fibre, you can erase repeatedly without troublesome ghosts occurring in prints, and redraw without feathered lines if you are using ink.

Available in three different weights, in frost-white or eye-easing blue. Test AGEPROOF VELLUM and you'll never use any other material for important tracings.

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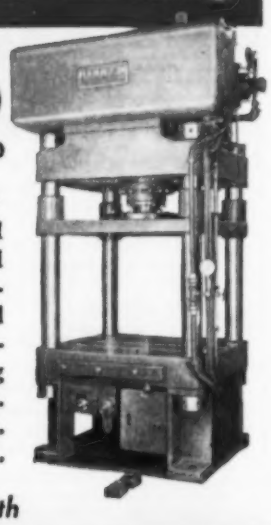
DIETZGEN
EVERYTHING FOR DRAFTING SURVEYING & PRINTMAKING

Free Samples!

For more details circle NED-8162 on enclosed inquiry slip

helpful HYDRAULIC PRESS catalog

75 STANDARD MODELS 5 TO 150 TONS



Keep it in your machine tool file. Hannifin Standardized Hydraulic Presses Catalog contains complete descriptions and specifications on Hannifin Forcing Presses, Straightening Presses, Column-Type Presses. Hannifin Corporation, 1127 S. Kilbourn Ave., Chicago 24, Ill.

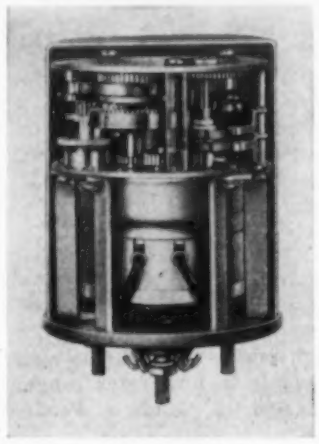
do ALL you CAN do . . . with

HANNIFIN

Air Cylinders • Hydraulic Cylinders • Hydraulic Presses
Pneumatic Presses • Hydraulic Riveters • Air Control Valves

For more details circle NED-8163 on enclosed inquiry slip

TIMING RELAYS
circuit reclosing and time delay types for various applications

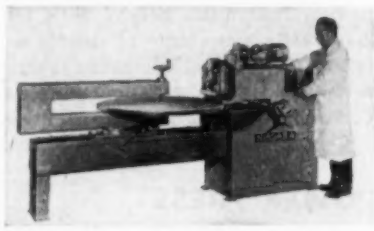


One of two new timing devices is type HRR circuit reclosing relay which automatically tests continuity of fault for a given number of times at specific spaced intervals. Should fault be cleared during any of trial test, control is restored to normal operating condition. If fault persists, protective device automatically locks out control circuit until fault is cleared manually. This type relay can be combined with various sensing devices to test for continuity or normal or abnormal conditions of voltage, frequency, current, pressures, speed, weight or light.

Type HTI miniature time delay relay (illustrated) is designed from standard components and assembled in compact form. Intended for use in electronic circuits, it can also be used where it is desired to delay operation of one circuit in relation to a second. Relays are available with maximum time ranges of 30 and 60 seconds and 2, 5, 15 and 30 minutes. Made by **R. W. Cramer Co.**, Middlesex Ave., Centerbrook, Conn.

For more details circle NED-8165 on enclosed inquiry slip

CIRCLE SHEAR & FLANGER
job setups changed in short time on versatile production machine



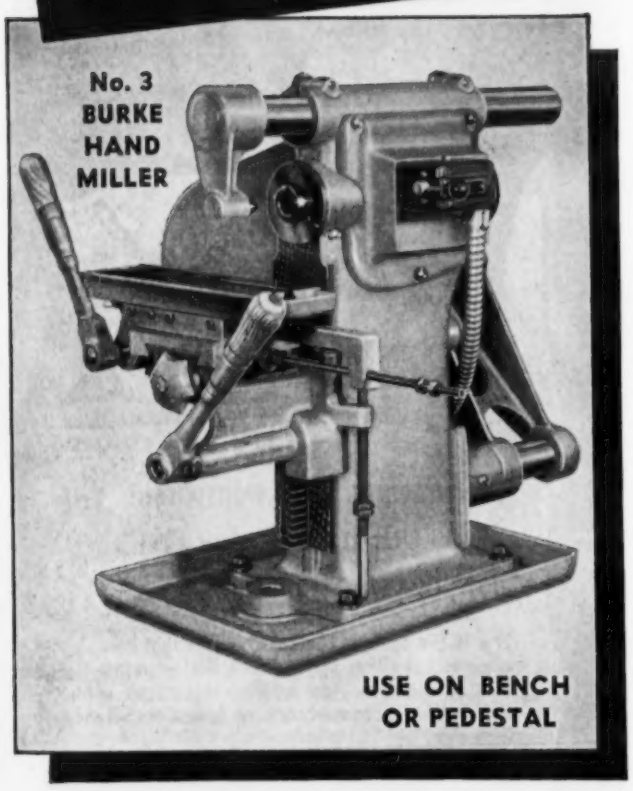
Designed for high production of disks and heads, this circle shear and flanger can be changed from one size job to another in a few minutes. Conversion from circle cutting to flanging or vice versa can be accomplished in 20 to 30 minutes. Tanks, drums, boilers, containers and metal furniture can be made on machine which, as circle shear, can cut circular disks or arcs of sheet metal up to 8-gage mild steel or 12-gage stainless steel. Disks 8 to 58 in. diameter are produced from square blanks, while those up to 75½ in. can be cut from octagonal blanks.

As flanger it turns flanges up to 1½ in. deep from circular disks. Upper roll is moved down by power with speed adjustable to suit diameter and thickness of blank. Formed heads require no further trimming or finishing for average commercial work. Standard flanging rolls form radius at root of flange of ⅜-in., appropriate for materials within machine's capacity. Made by **Niagara Machine & Tool Works**, Northland Ave. & Chelsea St., Buffalo 11, N. Y.

For more details circle NED-8166 on enclosed inquiry slip

Rugged! Rigid! Accurate! Economical!

LOW COST OPERATION HIGH PRODUCTION MILLING MACHINES

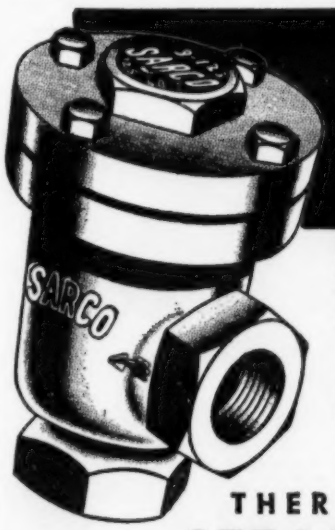


Send for circular describing various models of power and hand feed millers and attachments.

The BURKE MACHINE TOOL CO.

A Division of the U. S. Burke-Machine Tool Co.
East 72nd Street Cincinnati 16, Ohio

For more details circle NED-8164 on enclosed inquiry slip



FOR QUICK STARTS

In steam heated processes, output is increased if air is vented from the steam space.

The *rapid* removal of both large volumes of air and condensate are features of the

SARCO THERMOSTATIC STEAM TRAP

The powerful thermostatic bellows permits the use of an OVER-SIZE orifice and this orifice is WIDE OPEN when the trap is cold.

No seats to change . . . regardless of steam pressure changes. Only one operating part . . . the dependable, one-piece thermostatic bellows made of phosphor bronze, monel or stainless steel.

For removing air and condensate from dryers, kettles, pans, cookers, etc., use Sarco No. 9.
Write for Catalog 252. 505

SARCO SAVES STEAM — SARCO COMPANY, INC. Empire State Bldg., New York 1, N.Y. SARCO CANADA, LTD., TORONTO 5, ONTARIO

For more details circle NED-8167 on enclosed inquiry slip

ARMSTRONG BROS.
Better PIPE TOOLS

Reversible Ratchet STOCKS and Adjustable DIES

Exceptionally convenient where space is limited, this stock simplifies pipe threading close to walls, in corners and wherever operating room is restricted. With adjustable dies (cut exact, over or under size threads) it is an ideal tool where valves and fittings are being installed or maintained.

"ARMSTRONG BROS." Adjustable Dies are of special Vanadium Tool Steel, have "backed-off" teeth, correct cutting angle, ample chip clearance and correct throat angle. They start and cut easily, hold their sharpness and "spin" off pipe without jamming or tearing threads.

Write for Catalog

ARMSTRONG BROS. TOOL CO.
"The Tool Holder People"
5245 W. ARMSTRONG AVENUE • CHICAGO 30, ILL.

For more details circle NED-8168 on enclosed inquiry slip

Look NO MAINTENANCE! with

STAINLESS STEEL FLOATS

Your product will be better, will require virtually no maintenance, if it is equipped with Chicago's stainless floats. In fifteen years of making welded stainless steel floats, Chicago Float Works has produced many thousands with excellent results under severe operating conditions. This enviable record assures you of the finest, most dependable floats available to build into your products or for replacement use.

CHECK THESE FEATURES
- Standard Diameters 2 to 10".
- Pressures to 1000 lbs.
- Temperatures to 800°F.
- All Standard Spud Connections.
- Top quality 18-8 Stainless Steel.
- Non-corized weld for superior strength, and corrosion resistance available where required.

WRITE FOR FREE CATALOG

CHICAGO FLOAT WORKS, INC.
2342 So. Western Avenue • Chicago 8, Illinois

For more details circle NED-8169 on enclosed inquiry slip

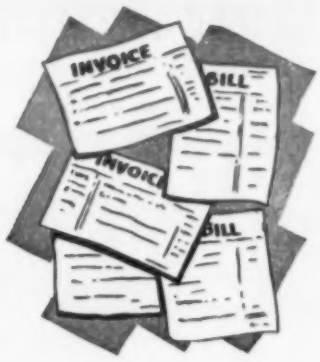
For more than four decades designers of fine machines have found that Ahlberg Precisioneered bearings offer outstanding opportunities for improving design, increasing efficiency, reducing maintenance and cutting cost. Ahlberg Bearings can improve your products' future, too. Let's talk it over. Ahlberg Bearing Company, 3025 W. 47th St., Chicago 32, Illinois.

AHLBERG BALL BEARINGS
ENGINEERED AND BUILT FOR THE WORLD'S FINEST EQUIPMENT

AUTOMOTIVE . . . INDUSTRIAL . . . AIRCRAFT . . . MARINE . . . ARMAMENT

For more details circle NED-8170 on enclosed inquiry slip

First cost is only a part of the overall cost of your springs



Cost conscious spring buyers know that the first cost does not present the complete picture of spring costs. Uniformity, ease of assembly into your products, on-time delivery are just a few of the other factors that can affect the ultimate cost of your springs. In some cases a minor modification in design can cut costs without any loss of quality. We at Accurate are confident that our springmaking "know-how" and facilities can lower the overall cost of your springs. We have done this for many manufacturers and will be pleased to cite actual cases. Most of all we'd like to show you what we can do for you. Phone or write today for prompt attention. Ask for the Accurate Spring hand book.

ACCURATE SPRING MFG. CO.

1805 W. Lake Street Chicago 24, Illinois

Springs — Accurate Springs — Wire Forms • Stampings

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Clarke CLICKS with CUSTODIANS!

Where floors take a beating...

CLARKE FLOOR MAINTAINER

Scrubs, waxes, polishes, steel wools, sands and shampoos. Improved safety switch. "Self-lifting" wheels. Four sizes.

CLARKE PORTABLE WET and DRY VACUUM

Quickly picks up water, dirt and dust. Quick-draining dump valve eliminates heavy lifting. Mounted on ball bearing, swivel, rubber casters

there is nothing like Clarke equipment. Custodians like Clarke machines because they make work easier and do it faster. You'll like Clarke because it's dependable—built to give years of hard service at low initial and upkeep cost. Let us prove on your own floors why Clarke machines have long been preferred for better floor care. Write for information or a demonstration.

Sales and Service Branches in All Principal Cities

Clarke

CLARKE SANDING MACHINE COMPANY
2210 Clay Street Muskegon, Mich.

▲ For more details circle NED-8172 on enclosed inquiry slip ▲

steam circulation—UP
fuel costs—DOWN

with

DUNHAM VACUUM PUMPS

You get better results from fuel dollars with Dunham Vacuum Pumps. That's because they easily produce—*and maintain*—vacuums up to 26 inches... your guarantee of rapid steam circulation... shorter "heat up" periods.

Maintenance costs are negligible. There are no moving parts under vacuum. No close tolerance parts to get out of adjustment.

Dunham Pumps are easy to install; take up minimum floor space. For full information, WRITE FOR BULLETIN 1401-14.

DUNHAM

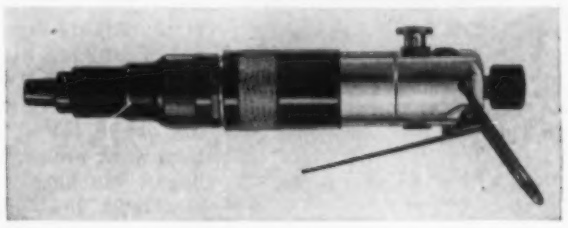
C. A. Dunham Co.
400 W. Madison St., Chicago 6, Ill.
In Canada:
C. A. Dunham Co. Ltd., Toronto
In England:
C. A. Dunham Co. Ltd., London

HEATING SYSTEMS AND EQUIPMENT

▲ For more details circle NED-8173 on enclosed inquiry slip ▲

SCREW DRIVER-NUT SETTER has instant pushbutton reverse

By pressing a button on tool, operator of model 7500 air-powered screw driver and nut setter is able to obtain instantaneous reverse action. When forward motion is



again desired, thumb is removed from button. In either case, tool need not be removed from work and no time is required for adjustment. An adjustable clutch can be preset to torque requirements. Clutch jaws automatically disengage when screw is set to desired tension. Positive clutch is available. Tool has speed of 1800 rpm, capacity of No. 0-8 machine screws and is equipped with speed regulator. It can be converted for nutsetting. Weight is 1.4 lb. Made by **Aro Equipment Corp.**, Erie St., Bryan, O.

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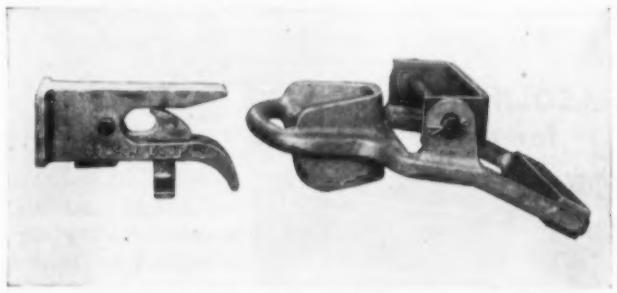
PHOTOGRAPHIC CONTACT PAPER makes positive copy in one step

Producing positive photocopies in one step by transmitted or reflected light, G-151 direct positive paper can be used for making readable positives from one-sided translucent or transparent originals. Paper will work equally well by reverse and reflex copying methods. It is adaptable to Remington Rand Portagraph or any other standard photocopying equipment. Being color-sensitive, colored stock, ink and stamps present no difficulties. Available from **Remington Rand Inc.**, Dept. NED, 315 Fourth Ave., New York 10, N. Y.

▲ For more details circle NED-8175 on enclosed inquiry slip ▲

AUTOMATIC COUPLER is interchangeable with other makes

Consisting of spring-loaded jaw and counterbalanced bail, automatic coupler provides complete coupling flexibility for single trucks or truck-trains. Cast steel units couple



automatically and can be disengaged from either side by foot operated latch. Balanced bail is always in coupling position regardless of truck angle, and spring-loaded jaw will not disengage on ramps. Couplers are interchangeable with other makes and can be bolted or welded to truck frames. Made by **Colson Equipment & Supply Co.**, Dept. NED-1, 1317 Willow St., Los Angeles 13, Calif.

▲ For more details circle NED-8176 on enclosed inquiry slip ▲

NEW HEAVY DUTY DIAL FEED

22" Diameter Table Top

★

4, 6, 9, 12, 18 or 36 stations

★

22" diameter table top positions up to 1000 lb. load quickly and accurately.

★

Write for Bulletin

Feeds work pieces to drilling machines, tappers, press rams, etc. Electrically controlled, air powered. Can be set to position 4, 6, 9, 12, 18 or 36 positions. Table swings into position gently. No abrupt impact. Locks firmly in position. Can be electrically synchronized to other machines. 22" diameter table top is easily removed for mounting jigs or fixtures, or an oversize table top.

Write for Bulletin T-85 today. Address: The Bellows Co., Dept. NED 1051, Akron 9, O.

The Bellows Co.
ESTABLISHED 1911
AKRON 9, OHIO

1309

▲ For more details circle NED-8177 on enclosed inquiry slip ▲

THIS IS *ONE* PLACE IN YOUR PLANT FOR PRIME-MOVER

Carrying the mail—parcel post and express packages—from the parts department shipping room. Gets the job done without delay at the end of the day.

Does Many Bulk-Handling Jobs—Faster!

Yes, there are many other places in your plant where a Prime-Mover will pay its way. This machine fills a real need in bulk materials handling. Quick change (2 minutes) from bucket to platform greatly increases its usefulness.

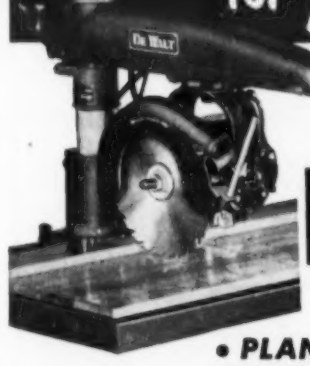
Dependable 5 h. p. Wisconsin engine and reverse under power with capacity of 1500 lbs. (10 cu. ft.). For name of distributor and additional data, write to us.

THE PRIME-MOVER COMPANY
MUSCATINE, IOWA

The Bell PRIME-MOVER

▲ For more details circle NED-8178 on enclosed inquiry slip ▲

the No.1 money saver for your plant



DEWALT

gives you more work for your money in:

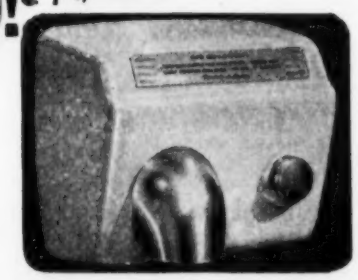
- *PLANT MAINTENANCE*
- *PATTERN SHOPS*
- *CRATING AND BOXING*

This versatile, all-purpose DeWalt is never idle! In *your* plant, it can take care of all your woodworking needs—quickly, accurately and safely. It is *many* machines in one! Simply by changing the cutting tool, you have another machine! Write for catalog. DeWalt, Inc., Dept. NE-10, Fountain Ave., Lancaster, Penna.

DEWALT A subsidiary of American Machine and Foundry Co.

▲ For more details circle NED-8179 on enclosed inquiry slip ▲

NO { Towels / Mess / Servicing



With the perfected, automatic

NATIONAL HAND DRYER

—dries hands completely dry in 20 seconds!

Eliminates the constantly mounting cost of paper towels or towel service—no storage problem, no filling of cabinets, no removal, cleaning and disposal time or attention. No time when clean, sanitary drying service is not available.

Do you really know how much your wash room service is costing you?

One fast-acting, tamper-proof NATIONAL HAND DRYER serves 1½ to 2 wash basins, pays for its cost from actual cash outlays in 12 to 18 months, gives quick, soothing drying service at the touch of a button, and is rapidly winning preference in hand drying because of its fast pleasing action.

Let us show you an actual example of continuous cost savings with NATIONAL DRYERS over towels. Fill in the coupon and attach to your letterhead for quick response.

National Dryer Sales Corporation
Dept. NE-10, 616 West Adams St., Chicago 6

Without obligation, send complete information on National Hand Dryers and example of cost savings.

( ) Also send information on National Hair Dryers.

Name .....
Address .....
City ..... Zone ..... State .....

▲ For more details circle NED-8180 on enclosed inquiry slip ▲

VEMCO DRAFTING MACHINES

Designed by Engineers for Engineers

1. *Convenient thumb-action indexing for every 15°.*
2. *Simple and positive band tightening device.*
3. *Flexibly articulated arms for easy head movement and flat-lying scales.*

THE engineers responsible for the design of VEMCO Drafting Machines are thoroughly familiar with drafting problems. VEMCO Machines incorporate ALL the facilities desired by the engineer to fill his exacting needs ★ The VEMCO offers smooth, effortless movement... positive setting and control for speed and accuracy... flexibility for convenient operation... elimination of an awkward assortment of drafting tools... sturdy construction for durability. ★ VEMCO Drafting Machines are finished in blue-green metallic color for eye comfort. ★ Ask your VEMCO dealer for a demonstration or write today for illustrated catalog covering drafting machines and drawing instruments.

V&E MANUFACTURING CO.
PASADENA 2, CALIFORNIA

For more details circle NED-8181 on enclosed inquiry slip

Power positioning of material increases production in sheet feeding operation.

perhaps
YOUR PRODUCTION CAN BE INCREASED THROUGH POWER POSITIONING OF TOOLS AND MATERIALS

PORTELVATOR®
has supplied the answer to others.

Start a beneficent chain reaction now; write for
BULLETIN P-507

Twenty-five ton capacity, self loading, self discharging die transfer table.

THE *Hamilton* TOOL COMPANY
901 HANOVER STREET • HAMILTON • OHIO • U • S • A

For more details circle NED-8182 on enclosed inquiry slip

here's your ANSWER to the

colored wire shortage!

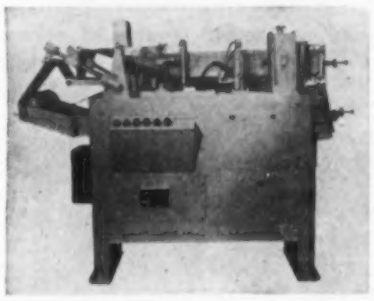
E-Z CODE WIRE MARKERS simplify the assembly of wiring circuits by number or standard NEMA color code—answer problems created by a colored wire shortage. They maintain accuracy...minimize rejections...simplify inspection...and get the most from new, inexperienced employees, even when assigned to the most complicated wiring projects. E-Z Codes, with the exclusive Speed-Tab, are faster to remove from carrying card, quicker to apply *(without moistening)* and adhere permanently to wire and cable, even when pulled through conduit. They are unaffected by heat and humidity. E-Z Codes are the efficient, low-cost answer to your colored wire shortage problem.

WRITE FOR SAMPLES TODAY!

Western Lithograph Co.
600 East Second Street
Los Angeles 54, Calif., Dept. NED-10
Box 3804
St. Louis 22, Mo.

For more details circle NED-8183 on enclosed inquiry slip

BAG MAKING MACHINE
makes up to 180 bags per minute



Exceptionally fast bag making machine fabricates up to 180 bags per minute in sizes ranging from 1 x 1-in. to 8 x 8-in. It can be equipped with electric eye registering device for operations with pre-printed bags. Machine handles most heat sealing films, foils or papers. Sealing irons, which are electronically controlled in range from 100 to 600° F, permit various width seals to be made in bottom of bag. Bottom seal is optional. Changeover to different bag sizes is simple and quick. Made by **Bartelt Engineering Co.**, Dept. 11P, Rockford, Ill.

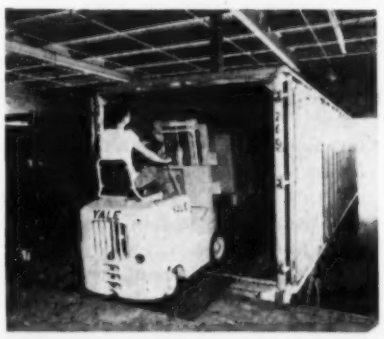
For more details circle NED-8184 on enclosed inquiry slip

PNEUMATIC VIBRATOR
directs and compacts fresh concrete

Freshly poured concrete can be compacted and its movement directed into forms by No. 521 pneumatic vibrator consisting of 2¾-in. diameter steel cylinder, 17½ in. long, at end of combination air and exhaust hose. Optional hose lengths of 10, 15 or 20 ft are available as well as standard 5-ft length. Extensions of ¾-in. air hose in 15-ft lengths are available for use with standard lengths. Additional features include adjustable automatic air line oiler, roll type throttle providing up to 8,000 vibrations per minute and steel sleeve around vibrator unit which minimizes grease loss from bearings. Made by **Independent Pneumatic Tool Co.**, 175 N. State St., Aurora, Ill.

For more details circle NED-8185 on enclosed inquiry slip

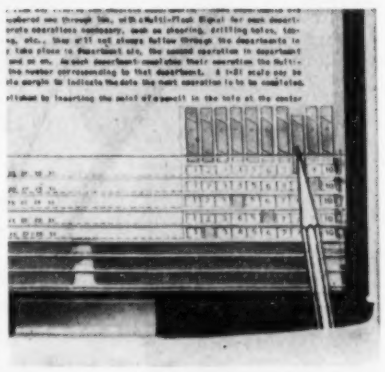
GASOLINE FORK TRUCK
for motor truck and freight car use



Low weight, low overall height and high maneuverability are combined in Trucker series of gasoline fork trucks developed for operation in and around highway motor trucks and railroad freight cars. Truck is offered in capacities up to 2000 lb and is 68 in. high with telescopic lift collapsed. Duplex models can elevate forks 54 in. before secondary channels rise to increase height. All controls are of automotive type. Hoisting, lowering and tilting controls are close to steering wheel. Engine power is transmitted through triple reduction spur and hypoid gears to drive axle. Made by **Yale & Towne Mfg. Co.**, Philadelphia Div., Dept. M-1, Roosevelt Blvd. & Haldeman Ave., Philadelphia 15, Pa.

For more details circle NED-8186 on enclosed inquiry slip

CONTROL RECORD FILE
shows information with colored tabs



Designed for use with Kardex visible margin index, Kardex Multi-Flash Signal system shows, at a glance, dates, production or assembly sequences or other control record data. System consists of horizontal arrangement of ¼-in. tabs in plastic jackets. With jacket fitted over numerical or alphabetical scale, signals are moved up and down to indicate desired information. Holders range in width from 1 to 10 in., and white or colored tabs are available. With several signals in a holder it is possible to "flag" coming dates or assembly line movements in any desired sequence, or maintain signal controls on two, three or more activities on single chart or scale. Records need not be removed for signal changing or other posting operations. Made by **Remington Rand Inc.**, Dept. NED, 315 Fourth Ave., New York 10, N. Y.

For more details circle NED-8187 on enclosed inquiry slip

DO YOUR OWN TESTING
...tensile, compression, transverse or shear

DILLON
Universal Tester
saves *Time and Money*

Average operator can make hundreds of tests *(Standard Model)* a day on spot welded specimens, riveted assemblies, plastic, wire, rubber, cloth, etc.

These portable testers easily handle flat, round or special shapes with extreme accuracy. Perfect for lab or shop. Manual or motorized. Will test materials with tensile strength as low as .25 pounds or as high as 125,000 pounds P. S. I.

Write today for free Tensile Strength Computer and illustrated folder with detailed information.

W. C. DILLON & CO., Inc.
1421-NE SOUTH CIRCLE AVE. • FOREST PARK, ILLINOIS

For more details circle NED-8188 on enclosed inquiry slip

Kester Solder

Kester Flux-Core Solders are made only from the finest grades of tin and lead commercially available. Fluxes chemically correct.

Eliminates Rejects

Rejects are eliminated when the correct solder for the job is used. Kester makes over 100,000 different types and sizes of Flux-Core Solder.

Faster

Using Kester "Speed" Solders will increase the output of your assembly lines.

KESTER SOLDER COMPANY
4201 Wrightwood Avenue
Chicago 39, Ill.
Newark, N. J. Brantford, Can.

KESTER SOLDER

SEND FOR FREE MANUAL: *"SOLDER AND SOLDERING TECHNIQUE"*

For more details circle NED-8189 on enclosed inquiry slip

BEVERLY THROATLESS SHEARS

MAKE CUTS LIKE THESE

QUICKLY... EASILY... ACCURATELY

16 ga. metal cut with Model B-1 Shear.

Save time, labor and material—use a Beverly to make any cut... straight, curved or irregular in any metal. Exclusive design allows work to be turned at any angle while cutting. Standard in the industry for years. 4 models—capacities to 5/16" mild.

See your Beverly Distributor for a demonstration. Write for FREE illustrated circular on Beverly metal cutting Shears.

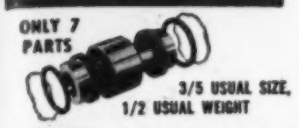
MODEL **B-3** with ball bearing hold down. Cap. 5/16" mild; 10 gauge stainless.

Beverly SHEAR MFG. CO.
3016 W. 111th STREET • CHICAGO 42, ILLINOIS

For more details circle NED-8190 on enclosed inquiry slip

Now You Can Improve Your Products HERE, Too!

NEW Sier-Bath GEAR COUPLINGS



- Cut Weight 50%
- Cut Size 40%
- Slash Assembly Time
- Slash Down-Time
- Provide Better Protection
- Last Longer

YOU've modernized the machines you manufacture—you specify only modern power units. Now—at long last—you can modernize "the link between" by using Sier-Bath Gear Couplings—the *only* really *new* gear couplings in years!

RESULT: Your assembly costs go way down—your equipment gets better protection—your customers get better products!

WRITE FOR BULLETIN—and name of nearest Sier-Bath Representative!
Bulletin gives installation photos, cost-cutting advantages, detailed plan drawings and specs for standard, vertical, mill motor and floating shaft types—sizes ⅞ to 6, HP 4 to 550. (Special sizes and types on request.)

Sier-Bath
GEAR and PUMP CO., Inc.
Founded 1905 Member A. G. M. A.
9240 HUDSON BLVD., N. BERGEN, N. J.
Also Manufacturers of Precision Gears, and Screw and Gearex Rotary Pumps

For more details circle NED-8191 on enclosed inquiry slip

KEEP CLEANING COSTS IN LINE

with Longer Lasting
FULLER FIBER BROOMS

You can buy other brooms for less than the Fuller Fiber Broom. True economy can be measured only by the length of productive life of a product in relation to its original cost. For example — a broom that costs one-half as much as another is *not* an economical buy when it lasts only one-fourth as long. We believe that a test will convince you that Fuller Fiber Brooms — because they last 3 to 4 times longer — are cheapest in the long run. Write today to . . .

SHIPPED FROM NINE DISTRIBUTION POINTS

INDUSTRIAL DIVISION FULLER BRUSH
At home... in business, too

3530 MAIN STREET
HARTFORD 2, CONN.
IN CANADA: FULLER BRUSH CO., LTD., HAMILTON, ONT.

For more details circle NED-8192 on enclosed inquiry slip

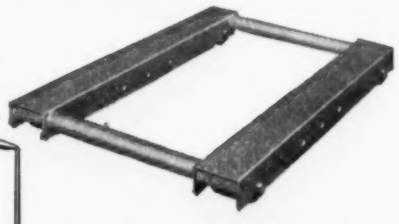
FASTER LOADING and UNLOADING of Trucks, Trailers and Freight Cars

1 Place Dolly near door or on tailgate.

Use of Olson Pallet Dollies to move loaded pallets inside Trucks, Trailers, and Freight Cars speeds up loading and unloading, avoids tie-up of fork trucks, eliminates laborious toting and increases capacity of docks as well as shipping and receiving departments.

Sizes and types for all requirements. Send for literature.

2 Set loaded pallet on Dolly with Fork Truck.



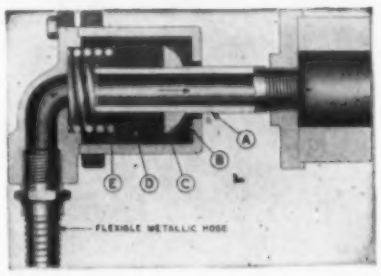
3 Roll to proper place for unloading.

Olson No. 703-1 Pallet Dolly carries a ton, yet weighs only 36 pounds. Requires little space when carried in truck or trailer.

SAMUEL OLSON MFG. CO., INC.
2423 Bloomingdale Ave.—Chicago 47, Ill.
Serving INDUSTRY SINCE 1900

For more details circle NED-8193 on enclosed inquiry slip

ROTARY PRESSURE JOINTS of heavy duty construction for pressure up to 250 psi

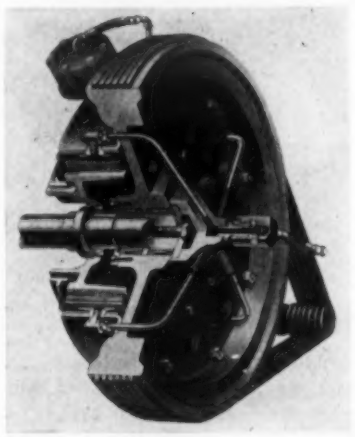


Transmission of heating or cooling agents to rotating rolls of papermaking, textile and rubber mill machines is facilitated by self-supporting type S rotary pressure joints suitable for operating pressures up to 250 psi. Device specifically combats misalignment on such machines as calenders where lateral movement of rolls is encountered. Sizes range from ¾ to 3 in. Joints are made in illustrated type for through-flow service with inlet at one end of roll and outlet at other end. Also available is syphon type which provides for inlet and outlet through same joint.

Sole rotating member consists of nipple (A) connected directly to roll or drum. It has a convex, hemispherical collar (C) which rotates against matching concave surface of carbon-graphite seal ring (B). Pressure acts as sealing force filling entire housing and forces seal ring tightly against collar. Machined rear portion of nipple serves as bearing surface and rotates in large carbon-graphite guide (D) fitted inside the body. This construction supports joint and permits it to shift as roll shifts to avoid danger of misalignment. Made by **Johnson Corp.**, 812 Wood St., Three Rivers, Mich.

For more details circle NED-8194 on enclosed inquiry slip

AIR FRICTION CLUTCH combined with air-applied brake



Both of constricting drum type, Press-Rite Airflex air friction clutch and spring and air-applied brake for use with Press-Rite power presses utilize centrifugal force to assure instant disengagement of friction surfaces when released. Brake is applied by constant pressure spring, opened and released by air, which opens a valve to release air from clutch. Interlocking of clutch and brake action prevents either from being engaged while the other is operating. Variable clutch gripping pressure permits press operator to set clutch grip for every job. Clutch is efficient at pressures from 40 to 80 psi and will operate satisfactorily at 25 psi. Full power is provided by 360-degree contact of friction surfaces. Unit is available with No. 3 30-ton and No. 85 85-ton presses. Made by **Sales Service Machine Tool Co.**, Dept. N, 2363 University Ave., St. Paul 4, Minn.

For more details circle NED-8195 on enclosed inquiry slip

Feed Parts Automatically with SYNTRON PARTS FEEDERS

Feeding Plastic Bases

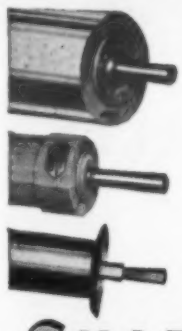
Feeding Bushings

INCREASE CAPACITY of grinders and presses, inspection and packaging devices, and other automatic processing equipment AT REDUCED COSTS by feeding parts of most sizes, shapes and materials single file . . . at variable rates . . . in oriented position . . . and without damage.

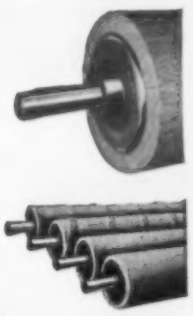
Catalog data upon request. Or send details of your problem along with sample parts to . . .

SYNTRON CO.
405 Lexington Ave. Homer City, Pa.

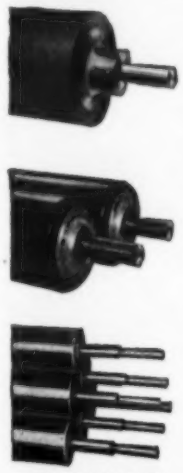
For more details circle NED-8196 on enclosed inquiry slip



MANY INDUSTRIAL ROLL PROBLEMS are solved by using



SHAF-TITE* ROLLS



Many patented constructions provide strongest possible shaft setting. Your choice of many different types and materials—wood, rubber, iron, brass, stainless steel plastic, etc. Whatever your roll problem, put it up to Rodney Hunt.

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Most complete publication of its kind

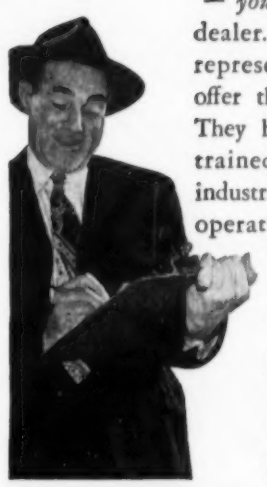
Industrial Roll Division
RODNEY HUNT MACHINE CO.
73 Maple Street, Orange, Mass.

*Reg. U.S. Pat. Off.

For more details circle NED-8197 on enclosed inquiry slip

B.F.Goodrich

Let this man analyze your Industrial Tires and Wheels



THIS man represents *your* local B.F.Goodrich dealer. He and *all* BFG representatives want to offer this service to you. They have been specially trained to analyze your industrial tire and wheel operations and to make impartial recommendations regarding size, type, care and maintenance. These recommendations are valuable to you. In many cases, industrial tire life has been increased as much as 100%! The recommendations this TW man makes are impartial because *only* B. F. Goodrich has a *complete* line of solids, semi-pneumatics and pneumatics in a wide range of sizes.

Call your local BFG representative today. Let him survey your operation . . . study loads, hauls, equipment, floors and hauling surfaces. Then let him offer his suggestions. Extra service from your industrial tires is yours for the asking.

A similar program is available for the manufacturers of industrial hauling equipment.

Write for full details of the TW TIRE AND WHEEL ANALYSIS PLAN

The B. F. Goodrich Co.
Department TW-138
Akron, Ohio
Please give me additional information on your new Tire and Wheel Analysis plan.
Name_____
Title_____
Company_____
City_____ State_____

RESEARCH KEEPS B.F.Goodrich FIRST IN RUBBER

For more details circle NED-8198 on enclosed inquiry slip

For more details circle NED-8199 on enclosed inquiry slip

The Simplest Filter Cartridge Lasts the Longest ...Twice as Long

Cartridge renewals are cut at least *in half* with Cuno Micro-Klean. And throughout its service life, Micro-Klean is *guaranteed* for specific performance.

Exclusive "graded density in depth" doubles dirt capacity, prevents clogging. Exclusive resinous impregnation and polymerization prevents shrinking, swelling, channeling. When replacement is required—it's *quick* and *clean.* Housing easily disassembled.

Guaranteed removal of *all* dirt: 10, 25, or 50 microns in size plus a large percentage down to 1 micron. Write for Bulletin MK-035. Cuno Engineering Corporation, Dept. 709M, South Vine Street, Meriden, Connecticut.

CUNO

Fluid Conditioning

Removes More Sizes of Solids from More Types of Fluids

For more details circle NED-8200 on enclosed inquiry slip

JOMAC GLOVES

are first choice of workmen who buy in this company's toolroom

A manufacturer* sells Jomac Gloves as well as leather palm, "monkey face," and various weights of canvas gloves to his workmen for handling sheet steel. Although Jomacs cost more, experience has shown they give longer wear, and they are now the first choice of workmen in this plant. *Name on request.

Jomacs are

Washable • Reversible • Flexible • Heat-resistant

Protect against heat, cold, rough and sharp edges

C. WALKER JONES CO.

6135 N. Lambert Street, Philadelphia 38, Pa.

For more details circle NED-8201 on enclosed inquiry slip

WET BLAST MACHINE
pump recirculates slurry

Incorporated in Liquamatte wet blast machine is vertical suction pump used for recirculation of slurry and always primed by flooded type suction. Abrasive cannot plug pump impeller when machine is shut down. Hopper need not be drained before pump is removed. Rubber hose is used to cut maintenance and eliminate water hammer noise. Armholes are equipped with gauntlets so that workman can use his own gloves and small work can be passed through armholes without opening doors. Reset timer tells number of blasting hours abrasive has been in machine. Air ejector blows slurry through hose to sump pit or barrels when abrasive needs changing. Clear view of work is obtained through large window by operator standing on floor. Abrasive does not bake on cool fluorescent lamps. Made by **American Wheelabrator & Equipment Corp.,** 508 S. Byrkit St., Mishawaka, Ind.

For more details circle NED-8202 on enclosed inquiry slip

BENCH MILLING MACHINE
speeds permit use of carbide cutters

Designed for rapid production milling of small parts that must be held to close tolerances, this bench type milling machine is powered by ¼-hp 1750-rpm heavy duty ball bearing motor which provides spindle speeds of 875, 1750 and 3500 rpm. Head has 3-in. travel, wide dovetail slides and adjustable gib. Hardened and ground nickel steel spindle is mounted on precision bearings. Meehanite table has 4 x 12-in. working surface. Table travel is 5 in. and saddle travel is 2½ in., both controlled by hand lever as is head travel. Conventional milling, profiling, drilling, keyseating, end milling and other operations can be performed. Made by **Barker Engineering Co.,** 501 Green Rd., Cleveland 21, O.

For more details circle NED-8203 on enclosed inquiry slip

DO YOU KNOW? Induction heating is a vital tool of industry. A few of the thousands of uses of this method of heating for brazing, annealing, hardening, etc. are demonstrated in 16-mm color sound motion picture film "Induction Heating." Prints for group showings are available upon request to Allis-Chalmers Mfg. Co., Advertising & Industrial Press Dept., General Machinery Div., 918 S. 70th St., Milwaukee 1, Wis.

For more details circle NED-8204 on enclosed inquiry slip

Next winter, keep heat and heating costs from

"HITTING the CEILING"

Thermolier Unit Heaters are the most economical answer to many tough heating problems. Easy to install and to relocate at any time to meet changes in plant layout or heating requirements. Waste no valuable floor or wall space. Aim heat where you need it. You pay only for heat you use . . . instead of banking heat wastefully up at the ceiling. Heat is turned on and off by throwing a switch, manually or automatically by simple thermostatic controls. Thermoliers have a patented internal cooling leg which permits use of inexpensive, simple thermostatic trap. Write for full descriptive catalog.

Thermolier Unit Heaters

GRINNELL

Grinnell Company, Inc., Providence 1, R. I.

Branch Warehouses in principal cities.

For more details circle NED-8205 on enclosed inquiry slip

INVESTIGATE "BEAR" SIMPLICITY and how it helps you eliminate noise and vibration in rotating parts *quickly, accurately* and *economically*...how it reduces wear of valuable machinery and improves performance of your finished products. "Bear" Dy-Namic Balancing Machines have simple micro-meter controls, direct-reading dials and adjustable supports to give you maximum control of balance.

FREE *Dy-Namic Balancing Manual* brings you information on latest Dy-Namic Balancing developments! *Write:* BEAR MANUFACTURING CO. Dept. N-5, Rock Island, Ill.

51561EN

"BEAR"

STATIC AND DY-NAMIC BALANCING MACHINES

For more details circle NED-8206 on enclosed inquiry slip

DAV-SON CORK-BACKED BULLETIN BOARDS

DAV-SON indoor and outdoor style Bulletin Boards provide attractive displays for up-to-the-minute announcements and posters. Your choice of hardwood or metal frames, with or without locking glass doors, illuminated or non-illuminated.

"THE SAFETY DIRECTOR"

Flashing display is a constant warning to employees to avoid accidents. Changeable letters permit timely safety messages to be set up as often as required. Definite improvement in safety records has been noted in plants using "The Safety Director."

Write for complete information regarding DAV-SON — Cork Bulletin Boards and Directories and the famous "Safety Director."

Ask for Bulletin "A"

DAV-SON

A. C. DAVENPORT & SON, INC.

ESTABLISHED 1932

311 N. DESPLAINES ST., CHICAGO 6, ILL.

For more details circle NED-8207 on enclosed inquiry slip

Fastener Problems? ESNA gives you over 3000 answers!

THE FAMOUS RED ELASTIC COLLAR IS VISIBLE EVIDENCE OF LOCKING SECURITY

Threadless and permanently elastic, it provides these 4 outstanding features:

1. Protects against nuts loosening due to VIBRATION
2. Keeps locking threads CORROSION FREE
3. Provides for accurate BOLT LOADING
4. Seals against LIQUID LEAKAGE along the bolt threads

When you design new products, look to ESNA for vibration-proof answers to your fastening problems. Plan now to give your assemblies—and your customers—the self-locking protection provided by Elastic Stop Nuts.

Let the readily identified Red Elastic Collar tell users this story about your products: that fastenings will remain tight... that precise adjustments will hold true... and that *your* investment in quality fasteners will reduce *their* maintenance costs.

And, to simplify your assembly operations, you'll find there are over 3000 various sizes and types of Elastic Stop Nuts ready to cut manufacturing costs. Standard parts are available that may be clinched to sheet metal... press fit... or pre-positioned by riveting or welding.

GET FREE ESNA PRODUCT LINE BULLETIN—Get a head start on tomorrow's new product designs by bringing yourself up to date on the latest fastening devices. Write ESNA for helpful data or the name of their nearest engineer. Elastic Stop Nut Corporation of America, 2330 Vauxhall Road, Union, N. J.

ESNA ELASTIC STOP NUTS

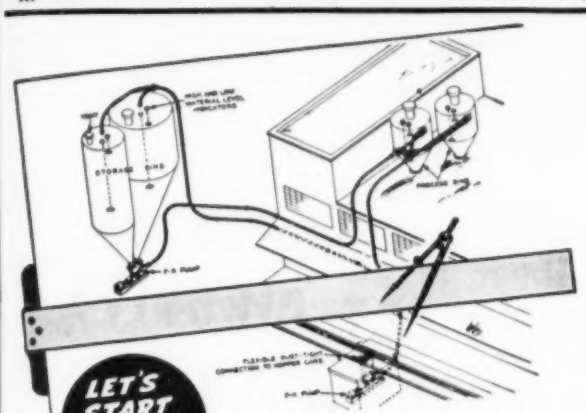
For more details circle NED-8208 on enclosed inquiry slip

MYSTIK Spra-Mask

Gives you Hand-Lettered Results with Speed and Low Cost of Stenciling

For fast, easy stenciling, get MYSTIK Self-Stik Spra-Mask. Die-cut to any design you wish, it sticks firmly to the surface to be painted, permitting one-man operation. There's no bleeding through the mask or under the edges to worry about. Just put it in place, cut the ties and spray. That's all you need to do for sharp, clear stencils. Available die-cut, in sheets, or in rolls of blank stock up to 36" x 60 yards inclusive. Write for information and free samples.
Mystik Adhesive Products,
2657 N. Kildare,
Chicago 39.

▲ For more details circle NED-8209 on enclosed inquiry slip ▲



LET'S START FROM SCRATCH

PROBLEM—Conveying

SOLUTION—To design and build a system that will meet your requirements, better your operation

Fuller Company designs and manufactures four primary types of pneumatic conveying systems for dry pulverized and granular materials. This permits the selection of the system best adapted to specific requirements—best equipped to handle most efficiently the materials being conveyed.

Each job is considered separately. That's why we say "Let's start from scratch" . . . when the plant is in the design stage. Then a preliminary study of local conditions can be made—and the proper equipment and layout recommended by specialists in the field of pneumatic conveying. We strongly urge all prospective purchasers to avoid preliminary engineering and to permit us to submit a recommendation or engineering study.

Fuller has a tangible resource in a personnel with many years of experience in all phases of pneumatic conveying. Fuller engineers are at your service to make a study of your requirements and to make a recommendation. There is no obligation, of course.

G67A

Fuller

FULLER COMPANY, Catasauqua, Pa.
120 S. La Salle St., Chicago 3
420 Chancery Building, San Francisco 4

▲ For more details circle NED-8210 on enclosed inquiry slip ▲

handling experts everywhere are talking about the

Look at these features of the new TOWMOTOR:

• Extra heavy duty frame • Drop forge beam steering axle • Functionally styled cowl • Full vision instrument panel • Precision controls in easy reach • Super-strength forks • Maximum free lift • Engineered tire equipment • Double universal joint • Precision mast construction • Maximum operating comfort • Heavy duty hydraulic brakes • One piece drive axle assembly • Heavy, industrial-type engines

TOWMOTOR CORPORATION, Div. 25
1226 E. 152nd St., Cleveland 10, Ohio

TOWMOTOR THE ONE-MAN-GANG

FORK LIFT TRUCKS and TRACTORS

RECEIVING • PROCESSING • STORAGE • DISTRIBUTION

▲ For more details circle NED-8211 on enclosed inquiry slip ▲

FIRE EXTINGUISHER
three sizes for one-hand operation

Approved by Underwriters' Laboratories, Redi-Grip pressurized portable fire extinguisher is available in 1, 2½ and 4-qt sizes. Charges offered are chlorobromomethane (CBM) or carbon tetrachloride, individually or in combination, with either air or carbon dioxide expellent. Extinguisher can be released from bracket and operated with one hand, with safety lock preventing accidental discharge. Range exceeds 30 ft and discharge time of 1 qt size is about 27 seconds at 70° F. Other features include removable head which can be disassembled for inspection, cleaning or adjustment, nonclogging nozzle, Teflon gaskets and flexible siphon tubs for maximum discharge at any angle. Made by **Stop-Fire, Inc.**, 127 Ashland Place, Brooklyn 1, N. Y.

▲ For more details circle NED-8212 on enclosed inquiry slip ▲

PACKAGE HEAT SEALER
mounts on bench or table

Time and labor needed in packaging metal parts and devices can be minimized with Crimpmaster model B bench-type, foot-operated heat sealer. Approved by Underwriters' Laboratories, device provides air, liquid and moisture-tight seal with thermoplastic materials. It operates on 110-v ac or dc and is made in various sizes with jaws from ⅞ x ⅞ x ¼ in. to ⅞ x ⅞ x 24 in. Serrated jaws reinforce heat seal with ten airtight horizontal serrations. Sealer mounts on bench or table, has foot control extending to floor and is supplied with or without Teflon-covered jaws, depending on types of material used with it. Made by **Cleveland Lathe & Machine Co.**, 673 Broadway, Cleveland 15, O.

▲ For more details circle NED-8213 on enclosed inquiry slip ▲

DO YOU KNOW? Concurrent with announcement of five new fork lift trucks, a sound-slide film has been released to provide information on the planning, designing and engineering incorporated in these models. This 15-minute film "What Makes It Tick?" demonstrates how equipment contributes to efficient, low-cost handling of materials. Private showings of film to key production and operating executives are being arranged through Towmotor Corp., 1219 E. 152nd St., Cleveland 10, O.

▲ For more details circle NED-8214 on enclosed inquiry slip ▲

Accurate Torque Measurements

. . . without Heavy Dynamometer and Scale Equipment!

Baldwin SR-4® Torquemeter

Small, precise, rugged. Consists of short length of shaft with SR-4® strain gages bonded to it, plus slip rings and housing. Translates torsional stress into electrical energy for indicating, recording, control or limiting instruments. Available in eight standard ranges: 0-100, 0-200, 0-500, 0-1000, 0-2000, 0-5000, 0-12,000, 0-30,000 in. lbs. Calibration inaccuracy not more than ±¼% of full range in either direction at any point from 0% to 100% capacity. For full dimensional and operational details ask for Bulletin 328.

BALDWIN-LIMA-HAMILTON
TESTING HEADQUARTERS
Philadelphia 42, Pennsylvania

In Canada: Peacock Bros. Ltd., Montreal, Quebec

▲ For more details circle NED-8215 on enclosed inquiry slip ▲

But water, steam, or oil discs are all the same to him. He wonders if the cold water disc will hold on this steam line. Just stick around for the answer.

Send for free book on valve installation tips

Ohio Brass VALVES
MANSFIELD . . . . . OHIO

▲ For more details circle NED-8216 on enclosed inquiry slip ▲

Twice the belt life in backstand grinding!

Try one simple change in your present backstand set-up. Using the same backstand grinder, the same type of abrasive belt by CARBORUNDUM, remove the contact wheel and replace it with our new serrated rubber "61" wheel.

Put the machine back to work. See for yourself how stock removal rates go up, how much longer the belt cuts, how belt changes are reduced. Watch for a better finish, less fatigue from your operator. Best of all, check your abrasive costs. They may be as much as 50 per cent less. See your CARBORUNDUM representative or distributor about the new "61" wheel. Or write Dept. NED 80-36 for details.

Only **CARBORUNDUM**
TRADE MARK

makes **ALL** *abrasive products*
. . . to give you the proper **ONE**

"Carborundum" is a registered trademark of The Carborundum Company, Niagara Falls, New York.

80-36

▲ For more details circle NED-8217 on enclosed inquiry slip ▲

• CLIPS • CLAMPS • GROMMETS • OPEN & CLOSED TANKS • PRESSURE VESSELS • RACKS • HANDLING & DIPPING BASKETS • EXHAUST SYSTEMS • PIPE • SCREENS • DRUMS • UTENSILS •

CLIPS AND CLAMPS
We have tools for all standard sizes and weights and over 500 specials.

arco covers anything with rubber!

• Our special facilities include one of the largest vulcanizers in the industry. We have capacity for covering all shapes, sizes in any volume. Also molded and extruded rubber production parts.

Let our engineers help you solve your difficult problems.

AUTOMOTIVE RUBBER COMPANY, INC.
8601 EPWORTH BOULEVARD • DETROIT 4, MICHIGAN

For more details circle NED-8218 on enclosed inquiry slip

FORK LIFT TRUCKS
feature pneumatic tires

Pneumatic tired models FPB20-24 and FPB20-15 fork lift trucks with 2000 lb capacity feature carriage mounted on adjustable side thrust rollers, strong and self-aligning masts, single lever two-speed forward and two-speed reverse gear shift, full front vision instrument panel and quick change heavy duty clutch. Rated at 24 and 15-in. load centers, trucks are powered with 4-cylinder, 61-cu in. displacement engine and have standard masts with 72, 84, 108, 114 and 120-in. lifts. Made by **Buda Co.**, Dept. LF, 15440 Commercial Ave., Harvey, Ill.

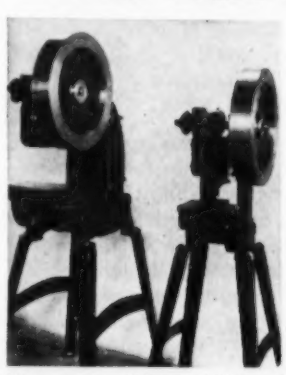
For more details circle NED-8221 on enclosed inquiry slip

INTERVAL TIMER
powered by synchronous motor

Designed for commercial and industrial service, Single-Set Tork timers are available for either permanent installation or portable use. Portable plug-in models with cord and plug are rated 6 or 15 amp. Single-pole single-throw normally-open switch is timed and powered by a self-starting Telechron synchronous motor. Switches in permanently installed models have 20 or 30-amp heavy duty contacts. Baked enamel case protects mechanism against dust. Timing interval is set by turning indicator knob to desired time on plainly marked dial. Various time cycles are available in range of 60 minutes to 24 hours. Additional features such as pilot lights, signal circuit, by-pass switch, stop switch and extra receptacles can be provided. Made by **Tork Clock Co.**, Dept. NED, 1 Grove St., Mt. Vernon, N. Y.

For more details circle NED-8222 on enclosed inquiry slip

PUNCH PRESSES
5-ton models with variable speeds



An 18-in. diameter, 110-lb flywheel supplies momentum needed for slow speed operation of two 5-ton power presses, while ram speeds can be varied from 95 to 280 strokes per minute by adjusting the ¾ to 2½-in. diameter of variable speed motor pulley. Standard 5-ton variable speed and four-in-one 5-ton variable speed models, with ram speeds suitable for deep drawing, piercing and blanking operations, are offered. Other features include one-piece 1⅛-in. crankshaft, 1-in. clutch drive dog built into clutch collar, large V-type ram guides, adjustable motor bracket and brake, and provision for switching from single to repeat operation instantly. Adjustable bed on four-in-one model permits conversion to long, half or horn type punch press. Same model's 12¾-in. throat allows punching to center of 24½ in. circle. Made by **Kenco Mfg. Co.**, Dept. NED, 5211 Anaheim-Telegraph Rd., Los Angeles 22, Calif.

For more details circle NED-8223 on enclosed inquiry slip

HEAVY-MATERIAL SPRAY PUMP
assures steady flow through gun

Speedy handling of spray finishing materials ranging from heavy mastics to enamels and lacquers is possible with Hi-Vol spray pump which fits in drums. Double-action pistons which force material through lines on both up and down stroke of air motor assures steady, even flow of heavy or light materials. Motor's 9:1 ratio permits spraying to high places. Control of pump is automatic through use of model 5 steady flow valve which shuts off pump and relieves all pressure when gun is not in operation. Pump is also available with agitator, oiler and pressure regulator for use on five-gun circulating system. Special units are designed upon request. Made by **A. Shelburne Co.**, 739-A Ceres St., Los Angeles 21, Calif.

For more details circle NED-8224 on enclosed inquiry slip

INCLUDE *Wheeler* REFLECTORS IN YOUR DEFENSE PRODUCTION PLANS

Whatever you manufacture, you can depend on the greater lighting efficiency of Wheeler Fluorescent Fixtures to help speed production. There's a Wheeler Fixture for every job and every plant condition—engineered for installation ease and maintenance savings. Write

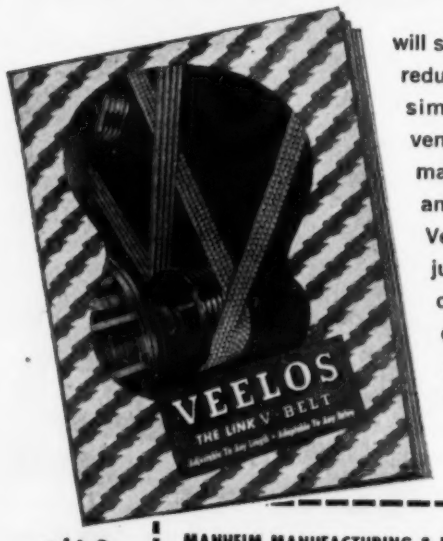
Wheeler Reflector Co.
275 Congress St. Boston 10, Mass.

Wheeler REFLECTORS — Distributed Exclusively Through Electrical Wholesalers

MADE BY SPECIALISTS IN SKILLED LIGHTING EQUIPMENT SINCE 1881

For more details circle NED-8219 on enclosed inquiry slip

This V-Belt Data Book



will show how you can reduce V-belt costs... simplify V-belt inventory . . . increase machine production and efficiency with Veelos—the adjustable V-belt. It contains useful engineering data and many illustrations. It's free and full of facts.

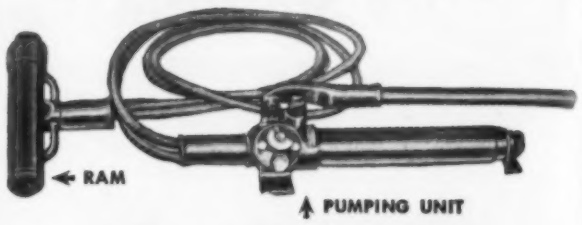
Clip Coupon for free Copy!

MANHEIM MANUFACTURING & BELTING CO.
650 MANBEL ST., MANHEIM, PA.

Name_____
Company_____
Address_____

For more details circle NED-8220 on enclosed inquiry slip

Cut maintenance costs in YOUR plant . . . . .



with a HEIN-WERNER "PUSH and PULL" HYDRAULIC JACK

You can save manpower, time and money at hundreds of maintenance and production jobs with a H-W Push and Pull Hydraulic Jack. In models of 4, 10 or 20 tons capacity, these units offer direct push or pull power for moving, pressing, bending, straightening, lifting and lowering operations. Operated by remote control. Available with stand and press to give you a portable workshop. Get complete details from your H-W distributor, or write us.

Hein-Werner HYDRAULIC JACKS

HEIN-WERNER CORP.
Waukesha, Wisconsin
Also manufacturers of a complete line of hydraulic jacks in models from 1½ to 100 tons capacity.

For more details circle NED-8225 on enclosed inquiry slip

The Detroit News

FUSE FAILURES ON LEAD POT CIRCUITS STOPPED COLD—

BY CHANGING TO FUSETRON FUSES

Excessive heating of ordinary fuses caused 3 to 4 fuses to open every week. Cooler operation of Fusetron dual-element fuses cured trouble completely.

"Prior to May 20, 1950, we had a bad time keeping all the electric heating circuits on our lead pots in full operation.

"We have two eight-ton lead pots and one six-ton. Each is electrically heated by single phase, 220 volt, 10 kilowatt elements, fed from a 220 volt, 3 phase source. The circuits on each are protected by sixty 60 amp. and nine 400 amp., 250 volt fuses.

Found 6 to 8 Fuses Blown

"To be sure that all heating elements were operating properly, we used to check all 207 fuses about once in two weeks. Generally our maintenance electrician would find 6 to 8 of the 60 amp. fuses open.

"This meant that our melting pots were not operating at full efficiency and in addition to this loss, our fuse maintenance and purchases were greater than they should be.

Eliminated Outages

"As an experiment, we changed all fuses over to FUSETRON dual-element fuses of the same amperages as had been previously used.

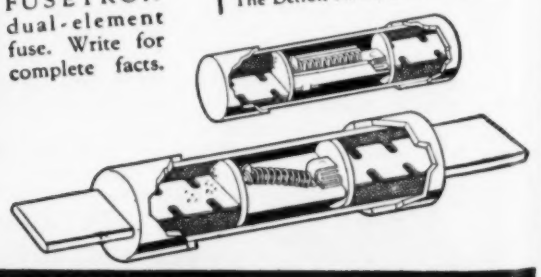
"To date, March 9, 1951, or after about nine months of using FUSETRON fuses, our records show that not one of them has failed.

"We attribute this remarkable result to the lower resistance of FUSETRON fuses which allows them to operate at a cooler temperature than other fuses that we have used."

Henry Sieloff, Chief Electrician
The Detroit News, Detroit, Mich.

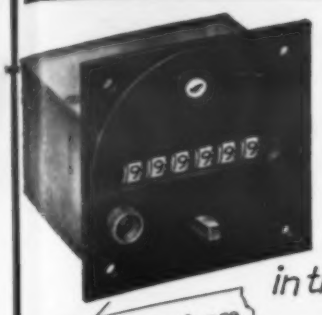
Don't Risk Losses in Your Plant!

One **needless** shutdown, one **lost** motor, one **destroyed** panel or switch, one **burned out** solenoid . . . may cost you more than replacing every ordinary fuse with a FUSETRON dual-element fuse. Write for complete facts.



BUSSMANN MFG. CO. St. Louis, Mo.

For more details circle NED-8226 on enclosed inquiry slip



...and here's a Counter that talks to Jet-Testers in their own language...

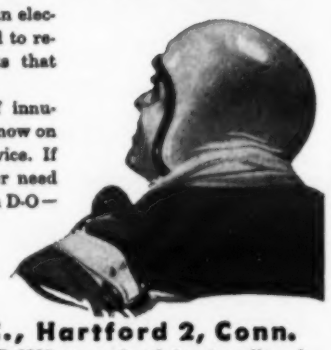
Added Evidence that

Everyone Can Count on

VEEDER-ROOT

This technician is reading an electrically operated counter, used to record data in test instruments that check aircraft performance.

And this counter is one of innumerable Veeder-Root specials now on duty in every arm of the service. If you can use such counters (or need counters of special design) on D-O—rated orders, then you can count on Veeder-Root to help you with all possible dispatch.



VEEDER-ROOT INC., Hartford 2, Conn.

For more details circle NED-8227 on enclosed inquiry slip

"Haynes Stellite" alloy half bushings

TRADE-MARK

reduce bearing wear caused by:

1. Conditions where efficient lubrication is impractical.
2. Dirt or other abrasive particles between bearings.
3. Corrosive agents in lubricant or atmosphere.
4. Dilution of lubricant or decomposition by heat.

HAYNES STELLITE alloy half bushings resist wear, heat and corrosion. Under conditions of metal to metal contact, they also resist scoring, galling and seizing. The bushings have good fatigue strength, low coefficients of friction and can be attached quickly and easily to the bearing surfaces of new or used shafts or journals.

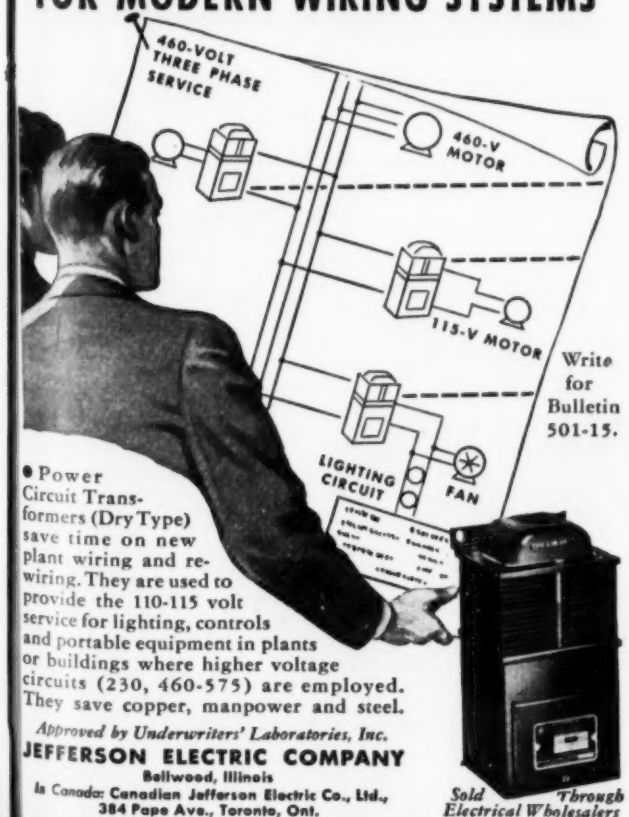
Write to our General Offices in Kokomo, Indiana, for information on the sizes and prices of available bushings.

Haynes Stellite Company
A Division of Union Carbide and Carbon Corporation
UCC
General Offices and Plant: Kokomo, Indiana

"Haynes Stellite" is a trade-mark of Union Carbide and Carbon Corporation.

For more details circle NED-8228 on enclosed inquiry slip

Jefferson Power Circuit Transformers FOR MODERN WIRING SYSTEMS



Write for Bulletin 501-15.

• Power Circuit Transformers (Dry Type) save time on new plant wiring and rewiring. They are used to provide the 110-115 volt service for lighting, controls and portable equipment in plants or buildings where higher voltage circuits (230, 460-575) are employed. They save copper, manpower and steel.

Approved by Underwriters' Laboratories, Inc.

JEFFERSON ELECTRIC COMPANY
Bellwood, Illinois
In Canada: Canadian Jefferson Electric Co., Ltd., 384 Pape Ave., Toronto, Ont.

Sold Through Electrical Wholesalers

For more details circle NED-8229 on enclosed inquiry slip

New Processes and Materials

PHOTOGRAPHIC PAPER unaffected by ordinary room light

Black-on-white photographic intermediates can be made directly from blueprints and negative originals without darkroom handling or special reproduction equipment with Kodagraph Repro-Negative Paper. It can be exposed on standard drawing reproduction equipment and processed with standard photographic chemicals. A silver-sensitized, medium high-contrast material, paper prints a positive from a negative and vice versa from any type old or new line original in good or bad condition. It will be available in variety of standard roll or sheet sizes from **Eastman Kodak Co.**, Dept. E, 343 State St., Rochester 4, N. Y.

For more details circle NED-8230 on enclosed inquiry slip

AIRCRAFT WIRE INSULATION protects under extreme temperatures

Fluoroflex C tubing for electrical wiring on military aircraft serves under severe cold at high altitudes or in heated areas around jet engines. Able to withstand temperatures from −150° F to 375° F, insulation is flexible and has good dielectric properties. It is unaffected by concentrated acids, alkalies, gasoline, oil, water, high humidity or tropical exposure and is noninflammable, transparent and of high tensile strength. Tubing is manufactured to order in sizes up to ½-in. by **Resistoflex Corp.**, Dept. NED, Belleville 9, N. J.

For more details circle NED-8231 on enclosed inquiry slip

BRAZING ALLOY CLAD STRIP of steel tailored for specific use

Simplified brazing of steel joints is assured by using Braze-Clad low carbon steel strip. This material is clad with silver brazing alloy on one or both sides, in any thickness ratio and melting range, to suit requirements of each application. Because steel surface is precoated evenly with brazing alloy, uniform spread is obtained and every joint is complete. Braze-Clad steel is available in thicknesses down to 0.005-in. and in any width up to 4 in. Made by **American Silver Co.**, Dept. NED, 36-07 Prince St., Flushing, N. Y.

For more details circle NED-8232 on enclosed inquiry slip

See the new Heavy Duty No. 500 Speed Way ½" Speed Drill

• All Anti-Friction Bearings.
• Wide-face Helical Gears—precision hobbed from nickel alloy steel.
• Integrally Die Cast Aluminum Body and Frame —all structural and supporting members die-cast-in.
• More Powerful Heavy Duty Motor 5½ Amp. input and ½ H.P. output.
• No. 34B Jacobs Geared Chuck and finest Electrical Equipment.
• Compact, Powerful, Light—weighs only 10 lbs.

WRITE FOR CATALOG

SPEEDWAY MFG. CO.
1892 So. 52nd Avenue, Cicero 50, Illinois

For more details circle NED-8233 on enclosed inquiry slip

SAVES TIME! SAVES MONEY! SAVES LABOR!

Gasboy CONSUMER ELECTRIC PUMPS

UNDERWRITERS APPROVED

The 10 GPM Series 15 Gasboy

A spectacular low-priced consumer electric pump combining all the beauty and convenience of high-priced commercial types. This newest of Gasboy electrics is perfectly suited where pump speeds of 10 GPM are ample.

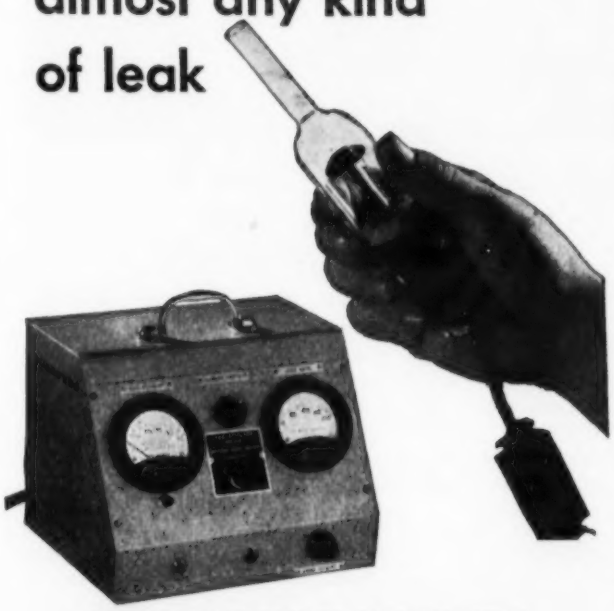
SEND FOR COMPLETE INFORMATION AND PRICES

MODEL 1550

WM. M. WILSON'S SONS, INC.
MANUFACTURERS OF GASBOYS, KERO-BOYS, OILBOYS, ROTABOYS
GENERAL OFFICES AND PLANT AT LANSDALE, PA.

For more details circle NED-8234 on enclosed inquiry slip

here's a simple device to locate almost any kind of leak



NEW DPi LEAK DETECTOR

MODEL LD-01

All you do is seal the sensitive element into the system being tested and bring the interior to a pressure of 10 mm Hg or less. Then you direct a small jet of harmless Freon Gas at suspected spots and watch the meter. It's as simple as that, and sensitivity is high enough even where one-millionth of atmospheric pressure is to be maintained.

It works like this: The sensitive element contains a heated platinum anode and a cold cathode with relatively low voltage between them. The tendency of hot platinum to emit positive ions is enormously stimulated by infinitesimal traces of halogens or their compounds. The circuit to accomplish all this uses only three standard radio tubes and operates from your 115-v a-c lighting circuit.

For full information write *Distillation Products Industries,* Vacuum Equipment Department, 763 Ridge Road West, Rochester 3, N. Y. (Division of Eastman Kodak Company).

DPi

high vacuum research and engineering

Also . . . vitamins A and E . . . distilled monoglycerides . . . more than 3400 Eastman Organic Chemicals for science and industry

For more details circle NED-8235 on enclosed inquiry slip

For more details circle NED-8236 on enclosed inquiry slip

BIG BENEFITS WITH Curvacore TRANSFORMERS

HERE'S WHY new *Curvacore* transformers give you more for your distribution dollar:

- Exciting current is 50% lower. Wound core with cold-rolled preferred oriented steel provides the same magnetization with less current.
- Ratio of losses is improved. New coil design gives better balance of core steel to copper.
- Thermal capacity is increased. New insulation and generous ventilating ducts provide a more efficient cooling system.
- Regulation is improved up to 15%, because impedance is lower.
- Size and weight are reduced by 15%.

Take advantage of these benefits by installing *Curvacore* transformers on your distribution system. For more information contact your local A-C sales office or write for Bulletin 61B7641. Allis-Chalmers, Milwaukee 1, Wisconsin. A-3491

Curvacore is an Allis-Chalmers trademark.

ALLIS-CHALMERS

For more details circle NED-8237 on enclosed inquiry slip

if you have a problem of misalignment

This new book will be a big help. It contains complete details on the entire Baldwin-Rex line of flexible couplings—Tru-Flex, Semi-Flex, Twin-Flex, Compound and Floating Shaft types. It gives you the facts on why Baldwin-Rex Couplings are truly flexible, are shock absorbing without backlash and are easy to install. The book includes all specifications, prices and horsepower tables.

Just use the coupon to send for your free copy today.

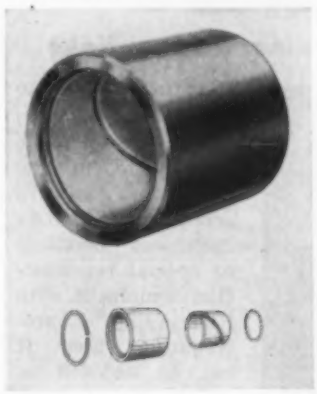
Baldwin-Duckworth Division of Chain Belt Company
364 Plainfield Street
Springfield 2, Mass. 51-408
Please send me Flexible Coupling Bulletin.
Name.....
Company.....Dept.....
Address.....
City.....State.....

BALDWIN·REX

For more details circle NED-8238 on enclosed inquiry slip

New Processes & Materials

NYLON-LINED BEARING
highly resistant to abrasion



Consisting of outer sleeve of metal and relatively thin lining of Nylon bearing material, Nylined bearings are made so that outer sleeve will expand and contract circumferentially around inner periphery of outer sleeve. Liner has narrow slot or compensation gap which interrupts circumference. In applications where lubricants can be used, one or more annular grooves on inside of outer sleeve form storage wells for lubricant which is distributed through compensation gap. Nylon is Du Pont FM 10001 type which will perform with or without lubricant. It is tough, resilient and resistant to abrasion, besides withstanding temperatures in excess of 250° F. Glazed surface which develops on Nylon results in low friction coefficient. Bearings are furnished in plain sleeve or flange types. They can be custom made, if required. Made by **Thomson Industries, Inc.**, 1035 Plandome Rd., Manhasset, Long Island, N. Y.

For more details circle NED-8239 on enclosed inquiry slip

SHELLAC BLEACHING PROCESS
cold compound improves toughness

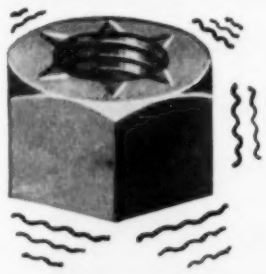
Cold process for bleaching shellac called Cold-Pro makes possible control of wax content, melting point and acid content. By maintaining shellac as cold as possible throughout bleaching, color, toughness, body, cutting time, solubility and stability are improved. Developed by **Acme Shellac Products Co.**, 131 Blanchard St., Newark, N. J.

For more details circle NED-8240 on enclosed inquiry slip

HEAT-SENSITIVE PAINTS
color changes show temperature

Available in 16 basic shades which undergo color changes at predetermined temperatures, Thermindex temperature-sensitive oil-resistant paints can be used for variety of applications. These include heat treating processes; safeguarding motors, bearings and other equipment against overheating; determining heat transfer qualities of lubricants and detection of faulty insulation in steam lines. Many of the paints exhibit successive color transformation at several temperature levels. Distributed by **Tempil Corp.**, Dept. D, 132 W. 22nd St., New York 11, N. Y.

For more details circle NED-8241 on enclosed inquiry slip

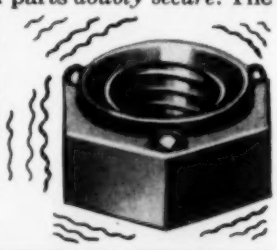


DEFEAT VIBRATION WITH GRIPCO LOCK NUTS

Use *Gripco* Lock Nuts in assembling your products and they'll "stay put" on the Bolt in spite of Vibration, Tension, Pressure and Shearing Forces. Their tenacious grip is not dependent on the fit of assembled parts, but only on the grip of the deflected Gripco Nut threads against the Bolt threads.

DEFEAT VIBRATION WITH GRIPCO "PILOT" WELD NUTS

Gripco "Pilot" Projection Weld Nuts with Gripco deflected threads make assembled parts *doubly secure*. The weld nuts are accurately centered over the bolt hole by the raised "Pilot" collar for Resistance Welding. *The Bolt screws into the nut* and the deflected Gripco Nut threads lock the Bolt and Weld Nut together.



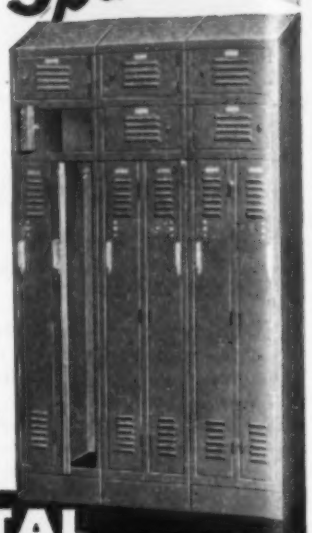
Also furnished without Gripco Locking feature.

5698 GRIP NUT COMPANY
308-G South Michigan Ave., Chicago, Ill.

For more details circle NED-8242 on enclosed inquiry slip

MORE STORAGE in Less Space!

Penco 2 IN 1 STEEL LOCKERS



Penco 2-Person Lockers will double your locker room facilities in the same floor space—or cut non-productive storage space in half! Now—boost employee morale and efficiency—give *all* workers these space-saving, full-size *private* lockers with separate hat and coat compartments.

Prompt Delivery On Priority

Group of 3 Type 734 lockers with sanitary slope tops and closed bases. Accommodate 6 persons!

PENN METAL Corporation of Penna.
Founded 1869 by L. Lewis Sagendorph
82 OREGON AVENUE, PHILADELPHIA 48, PA.

For more details circle NED-8243 on enclosed inquiry slip

NEW • NEW • NEW • NEW • NEW

★ AUTOMATIC SAFETY FEATURE

LINEMASTER "LEKTRO-LOK" FOOT SWITCH

If you need a foot switch that's small, sensitive, safe, choose Lektro-Lok. Mechanical interlock allows only one circuit to function at a time. Operates on teeter-totter principle with selective circuits — yet single cord receptacle cuts costly harness assemblies.

Lektro-Lok weighs only 10 oz. Made to take it—rugged stamped metal case. It's the new, modern, SAFE foot switch from Linemaster, the Leader!

ONLY $5.25 (less in quantities)

Let us quote on your special problems.

Write today for folder and price list.

LINEMASTER the leader

SIMONDS MACHINE CO., INC.
33 VIKING TERRACE • SOUTHBRIDGE, MASS.

For more details circle NED-8244 on enclosed inquiry slip

THREAD PIPE *faster!* Cut Costs with TOLEDO

Toledo No. 11 Ratchet Threader, ½" to 1¼" pipe.

Toledo No. 999 2" Power Pipe Machine, wheel or knife cut-off.

Speed the work—beat high costs—with genuine TOLEDO Pipe Tools and Power Pipe Machines! Designed for *easy handling, faster cutting* . . . complete range of capacities. Hand Tools, all pipe sizes, ⅛" to 12" and ¼" to 1" bolts. Power pipe machines, up to 2" and 4" capacity. Time-proven dependability. Write for catalog. The Toledo Pipe Threading Machine Co., Toledo, O.

RELY ON THE LEADER TOLEDO

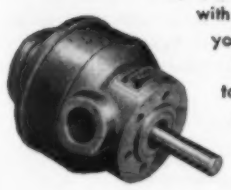
PIPE TOOLS . . . POWER PIPE MACHINES . . . POWER DRIVES

For more details circle NED-8245 on enclosed inquiry slip

STOP THE PRESSES*!

...and install GEROTOR

hydraulic pumps for improved performance

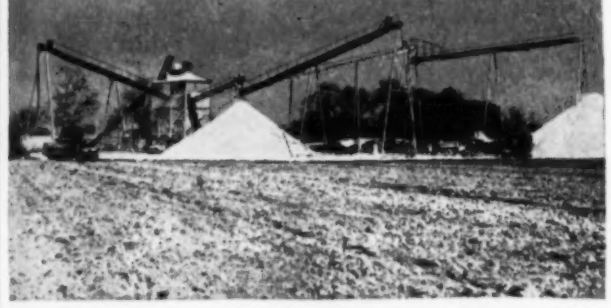


* Punch presses . . . baling presses . . . straightening presses . . . piercing presses . . . assembly presses . . . plastic presses . . . any hydraulically operated presses work better with GEROTOR Hydraulic Pumps. Whether you build them or maintain them, specify GEROTOR Pumps . . . for pressures up to 1200 p.s.i. continuous, 1500 intermittent . . . deliveries from .4 to 40 g.p.m.

GEROTOR MAY CORPORATION
P.O. Box 86, Baltimore 3, Md.

For more details circle NED-8246 on enclosed inquiry slip

PROMPT DELIVERY
BAUGHMAN "HI-SPEED" CONVEYORS



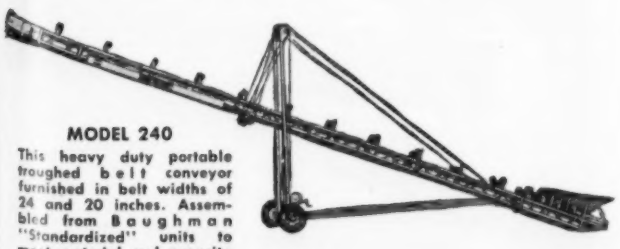
GET THESE "HI-SPEED" FEATURES

- "Standardized" Units usually shipped from stock.
- "Job-Fitted" . . . order assemblies to meet your requirements.
- Set up on the site in a few hours time.
- Bridge-like design—braces welded in correct position for maximum strength.
- Constructed to conform to strictest engineering practices.

AND DEPENDABLE "HIGH-SPEED" SERVICE

Baughman HI-SPEED Conveying Equipment is the result of practical experienced engineering—proven in operation. It will meet exact requirements, increase output and reduce operating costs. Baughman "Standardized" production methods cut equipment expenses. Quality materials and expert construction minimize maintenance costs. We welcome the opportunity to study your material handling problems . . . there is no obligation.

1. Conveniently located distributors from coast to coast.
2. Conveyors shipped in sections for lower freight costs.
3. Standardized construction . . . replacement parts immediately available.



MODEL 240
This heavy duty portable troughed belt conveyor furnished in belt widths of 24 and 20 inches. Assembled from Baughman "Standardized" units to meet material and capacity requirements. Mast type hoists recommended for conveyors from 50 to 70 feet long. Available with Swivel Wheels for easy maneuvering, etc. (Special order only.)

If It's HI-SPEED . . . It's BAUGHMAN

manufactured by BAUGHMAN MANUFACTURING CO., Inc.
172 E. ARCH STREET JERSEYVILLE, ILL.

For more details circle NED-8247 on enclosed inquiry slip

New Processes & Materials

NONSLIP FLOOR COVERING is pressure-sensitive type

Designed to prevent slipping accidents, Fera-Mat floor covering provides nonslip walking surface composed of mineral granules resin-bonded to heavy duty weatherproof cloth backing. Supplied with protective liner on underside which is peeled off at time of installation, floor covering has pressure-sensitive adhesive which makes it adhere to any clean, dry and smooth surface. It is nonrigid, permitting heavy loads to pass over it without damage. Maintenance is simple since dirt can be brushed out. Steps, ramps, platforms, factory floors, walkways, docks, running boards, step ladders, aisles, storage tanks and fire escapes are among many surfaces to which covering can be applied. It is available in black, red or green 6 x 24-in. cleats or in black rolls 6 in. wide by 96 ft long. Made by **American Abrasive Metals Co.**, 460 Coit St., Irvington, N. J.

For more details circle NED-8248 on enclosed inquiry slip

BOILPROOF GLUE bond unaffected by 1-year storage

Meeting military specification MIL-A-379A, Casophen LT-68 resorcin-phenol adhesive can be stored for 1 year without sacrificing its working properties or quality of bond. Although designed as type II adhesive for intermediate temperature setting, it is also meeting requirements for type I room temperature setting. Bond is completely resistant to boiling and outdoor exposures. Use can be for laminated frames, keels and other ship parts, furniture and skis. Made by **Borden Co.**, Chemical Div., Dept. NED-1, 350 Madison Ave., New York 17, N. Y.

For more details circle NED-8249 on enclosed inquiry slip

STAINLESS STEEL STRAP for expanding-contracting surfaces

Problem of holding insulation on tanks, drums, pipe and other equipment which expands and contracts in circumference can be solved by Expand-R-Strap corrugated

tempered stainless steel strap. It stretches and returns to original length with spring-like action, maintaining constant pressure on unit it binds, yet not cutting into insulation. Strapping is resistant to corrosive action of most chemical fumes and is applied like plain strapping with standard strapping tools. Made by **A. J. Gerrard & Co.**, 1954 Hawthorne Ave., Melrose Park, Ill.

For more details circle NED-8250 on enclosed inquiry slip

BEARING KIT

ASSORTMENT 100 POPULAR SIZES & MAKES IN PARTITIONED PLASTIC BOX

NEW-PRECISION FACTORY LIST PRICE ON BEARINGS OVER $250.00

Bearings are SKF — FAFNIR — MRC — NEW DEPARTURE — NORMA — FEDERAL and others. Sizes from 2mm to 8mm inside diameter, and 4mm to 24mm outside diameter. MECHANICS — TECHNICIANS — for servicing small machines such as Washing Machines, Vacuum Cleaners, Home Appliances, Cameras, Toys, Instruments, Automotive and equipment of all kinds.

No. MA-1 Assortment of 100 Ball Bearings in Plastic Box complete as shown, postpaid. ONLY $19.95

No. MA-2 Junior Assortment of 50 Ball Bearings in Plastic Box complete, postpaid. ONLY $10.95

IF YOU REQUIRE SPECIAL BEARINGS OF ANY SIZE, TYPE OR MAKE, WRITE US FOR IMMEDIATE SHIPMENT FROM STOCK.

• DISPOSE OF YOUR OBSOLETE OR OVERSTOCK BEARINGS. WE PAY HIGHEST PRICES FOR ANY TYPE OF BALL, ROLLER, TAPER OR OTHER TYPE BEARING. WRITE OR PHONE WHAT YOU HAVE TO OFFER.

MEDALLION MFG. CO. Dept. NE-7
25 E. 25th St. CHICAGO 16, ILL. CAlumet 5-0327

For more details circle NED-8251 on enclosed inquiry slip

FOR PROOF BEYOND COMPARE
Send for
RUBYFLUID
Soldering Flux

Special Offer

For $1 Ruby will send you one pint of liquid and one half pound of paste soldering flux.

Try it! See for yourself the amazingly stronger, smoother and longer lasting unions you get when you use Rubyfluid.

Rubyfluid
Wets out freely . . .
Has no harmful fumes . . .
Acts quickly and saves time . . .

In addition Ruby will send you Free a new booklet on "How to Solder."

SEND YOUR $1 TODAY TO—
Ruby Chemical Co.
72 McDowell St.
Columbus, Ohio

Rubyfluid

For more details circle NED-8252 on enclosed inquiry slip

small size

Yarway Impulse Steam Trap is hardly larger than a pipe union. Easily installed *anywhere.* ½" trap weighs 1¼ lbs.; 2" trap only 8½ lbs. Over 650,000 Yarway traps have been *proved on the job.* Sold by over 200 distributors. For name of nearest one, or free bulletin, write . . .

YARNALL-WARING CO., 131 Mermaid Ave., Phila. 18, Pa.

YARWAY IMPULSE STEAM TRAP

For more details circle NED-8253 on enclosed inquiry slip

SAVE ON PARTS AND MATERIALS

THIS FREE DISSTON BOOK TELLS YOU HOW!

This new Disston guide is a "must" reference book for every engineer, designer, and purchasing man. It gives you the story of Disston Custom Steel Parts: what they are; how they are made; typical products; how to order. And it blue-prints the facilities of the Disston Custom Parts Plant for handling intricate designs, exacting tolerances, and special heat treating . . . to individual specifications. We'll gladly send your copy on request—write on your letterhead or use the coupon.

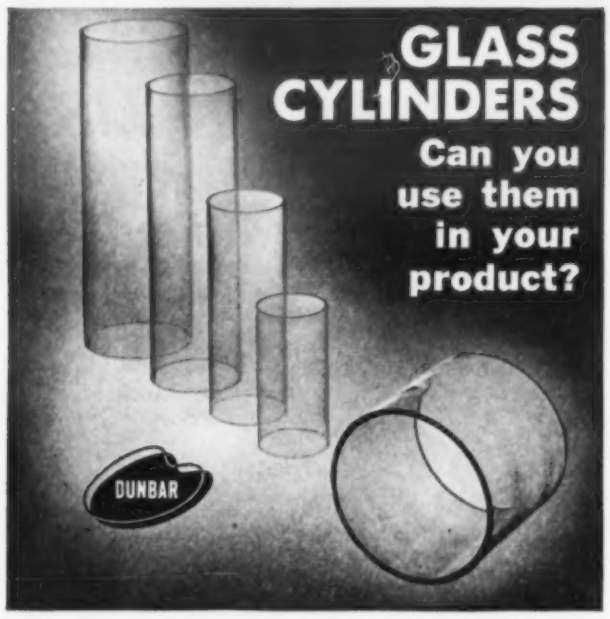
HENRY DISSTON & SONS, INC.
1029 Tacony, Phila. 35, Pa., U. S. A.
(Canadian Factory: Toronto 3, Ont.)

FIGHT WASTE

Please send me FREE, without obligation, your reference book on Disston Custom Steel Parts.

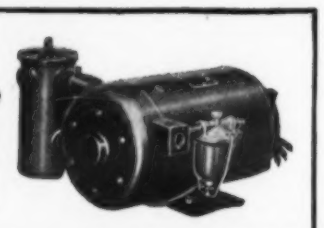
NAME
ADDRESS
CITY ZONE STATE
COMPANY

For more details circle NED-8254 on enclosed inquiry slip



For dispensers, merchandise displays, visible hoppers, lighting fixtures, sight feeders, meters, columns or any other applications, DUNBAR offers you a wide variety of cylinder sizes in economical quantities. Or we will fabricate blown glass cylinders to your specifications. We invite your inquiries. Write Dept. 74 for our Glass Cylinder catalogue No. C-51.

Dunbar Glass Corporation
DUNBAR, WEST VIRGINIA
NEW YORK CHICAGO LOS ANGELES
For more details circle NED-8255 on enclosed inquiry slip



BUT PLENTY OF VACUUM!

MOTOAIR is the most compact pump you can buy—without sacrificing effective power. Direct rotary drive eliminates extended drives, gears and belts. Whether used independently, or as a machine accessory, it requires little more space than the size of its motor — which is *part* of the pump.

MOTOAIR* PUMP for VACUUM or PRESSURE

LESS PARTS TO WEAR OUT!

No pulsation. Functions perfectly with normal, wall or ceiling mounting. Made in a range of sizes.

Ask for details!

* Reg. U. S. Pat. Off. 815

NEW JERSEY MACHINE CORPORATION
1530 Willow Ave. • Hoboken, N. J.
Factory offices in Chicago, Cincinnati, Los Angeles
For more details circle NED-8256 on enclosed inquiry slip

YOU CAN DO so many different jobs —so much better— so much *faster* with a DELTA UNISAW

★ RUGGED CONSTRUCTION FOR STEADY PRODUCTION
★ BIG CAPACITY
★ HIGH SPEED
★ EXTREME ACCURACY

Just what the name implies . . . a truly universal saw. It's a 10" tilting arbor saw that makes a 3⅛" cut . . . tilts to 45° . . . cuts to center of a 50" panel . . . makes perfect mouldings . . . cuts dadoes and tenons accurately . . . at high speed and low cost.

Meanwhile, write for the complete Delta catalog that describes it and other fine Delta tools.

The initial investment for this time-saving, money-making Unisaw is less than you would think. Ask your Delta dealer about the Unisaw today.

There's a Delta Power Tool for Your Job- Wood or Metal Working
53 MACHINES — 246 MODELS — MORE THAN 1300 ACCESSORIES

DELTA MILWAUKEE
DELTA POWER TOOL DIVISION
Rockwell MANUFACTURING COMPANY
617L E. VIENNA AVENUE, MILWAUKEE 1, WISCONSIN
For more details circle NED-8257 on enclosed inquiry slip

New Processes & Materials

CORRUGATED PACKAGING MATERIALS
file type sample kit is free

Means for determining correct type of corrugated is provided by fingertip reference file of corrugated materials. This Chippakit contains samples of entire line of Chippaflex flexible corrugated and single-faced corrugated, and each sample is labeled showing weight, grade, backing sheet, fluting and other data. Kit will be kept up to date as new materials are developed. Offered free to users and buyers of corrugated materials by **Chippewa Paper Products Co.,** 2425 S. Rockwell St., Chicago 8, Ill.

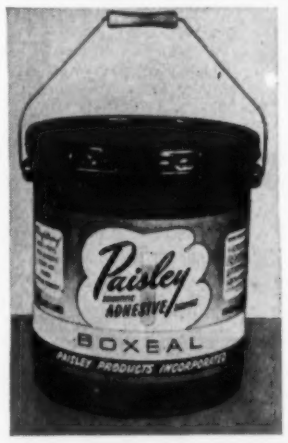
For more details circle NED-8258 on enclosed inquiry slip

CALKING CARTRIDGES
nozzle adapts to variety of uses

A self-forming plastic nozzle is improved feature of Handicalk metal and paper calking cartridges. Nozzle adapts to variety of specific calking uses and tip can be permanently reshaped by using flame or hot water. Metal cartridge is designed for use with Twistite caulking guns, while paper cartridge is used with wire-bail or barrel-type commercial guns. Tests show metal cartridge will take 10 lb internal air pressure without leaking and hydraulic pressure of 55 lb without bursting. Strong seams, double-crimped end construction plus airtight nozzle seal assure fresh calk under handling and storage conditions. Made by **Gibson-Homans Co.,** 2346 Woodhill Rd., Cleveland 6, O.

For more details circle NED-8259 on enclosed inquiry slip

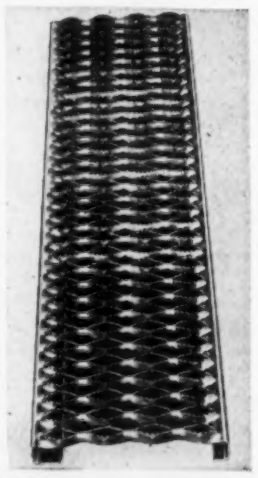
SHIPPING CASE GLUE
seals boxes in 20 to 45 seconds



Sealing of all types of container boards and all shapes of boxes, top and bottom flaps, side or telescope sleeves can be carried out by machine or hand brushing in 20 to 45 seconds using Boxeal shipping case glue. Permanent noncrystallizing bond reinforces rated strength of corrugated shipping cases as it resists stresses and strains vertically and laterally. Improved dextrinized starch adhesive can be used as received for fast bonding in automatic case sealing machine, but for hand brushing it can be further diluted with water. Adhesive is noncorrosive, nontoxic and will not injure hands, face or clothes. Made by **Paisley Products, Inc.,** 1776 Canalport Ave., Chicago 16, Ill.

For more details circle NED-8260 on enclosed inquiry slip

NONSKID GRATING
of 12 to 16-gage steel or aluminum



Diamond-shaped pattern of Grip-Strut nonskid grating has open area in excess of 75 per cent of total surface. Struts or vertical members are joined by integral saddles to create lateral struts which add strength. Material used is sheet steel or aluminum in gages ranging from 12 to 16. Each piece of grating is made from one piece of sheet material. Reticulating operation in manufacture does not change original measurements of sheet material as it is a slitting and folding process. Metal for forming into longitudinal channels, step risers or moldings is integral with grated surface. Sections 20 x 48-in. have withstood over 100,000 1-in. oscillations without damage. Made by **Globe Co.,** Dept. C, 4000 S. Princeton Ave., Chicago 9, Ill.

For more details circle NED-8261 on enclosed inquiry slip

HALLOWELL UNI-TRUK

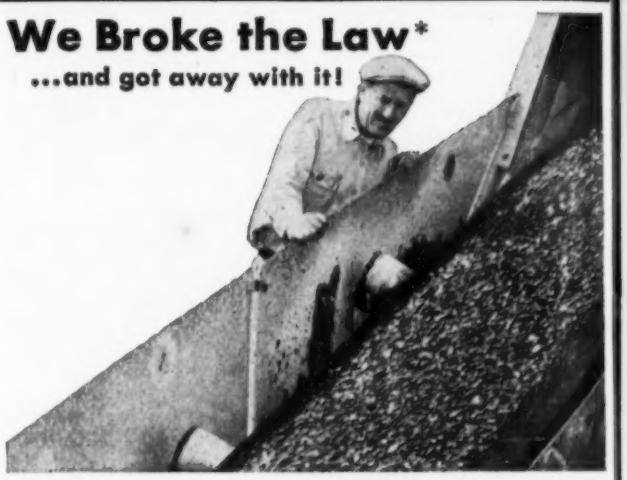
HEAVY-DUTY TRUCKS FOR TOUGH JOBS

Tough jobs are easy with these sturdy, 2-wheel HALLOWELL Trucks. All-welded, all-steel construction minimizes weight (heavier model #738 weighs only 50 lbs.), cuts maintenance costs, lengthens truck life. Ribbed, angle-form steel nose carries heavier pay loads without bending, reinforces "UNI-TRUK" at point of severest stress. Two popular models: #738 with 8" wheels and braced legs; #734 with 6" wheels, no legs.

Write for Bulletin 718-2.

HALLOWELL®
MATERIALS HANDLING EQUIPMENT
SPS STANDARD PRESSED STEEL CO.
JENKINTOWN 24, PENNSYLVANIA
For more details circle NED-8262 on enclosed inquiry slip

We Broke the Law*
...and got away with it!



Crushed wet rock at Henry J. Kaiser's Radum Plant near Pleasanton, California, just naturally wanted to roll downhill. This presented a serious obstacle to the plans of Kaiser engineers, who were trying to increase tonnage at the sizing screens without the expense of installing an elevator system to lift this extremely wet and muddy rock. Outlining their problem to the Gilmore Steel & Supply Company representative, the Kaiser men were introduced to the use of Boston Woven Hose & Rubber Company's Bull Dog Herringbone Conveyor Belting. This belt, shown here, features a unique top cover of molded chevron designed rubber steps for uphill conveying and provides efficient drainage of water and mud from the belt surface.

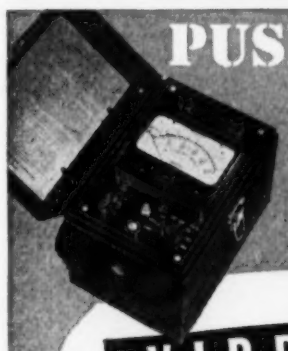
Now in service only a little over 16 months, the BWH belt has already established a record of high tonnage at low cost.

If your application calls for a special construction, let us demonstrate how dependable BWH products can help boost your production and profits, while lowering your costs.

*We refer, of course, to Newton's law of gravity.

Another Quality Product of
BOSTON WOVEN HOSE & RUBBER CO.
Distributors in all Principal Cities
PLANT: Cambridge, Mass. • P.O. Box 1071, Boston 3, Mass., U.S.A.
For more details circle NED-8263 on enclosed inquiry slip

PUSH BUTTON INSULATION RESISTANCE TESTING



with VIBROTEST

• RANGES TO 50,000 MEGOHMS
• NO CRANKING • NO LEVELING
• ALL-ELECTRIC • RUGGED
• FULLY PORTABLE • ACCURATE

VIBROTEST is built throughout to make insulation resistance testing FAST, EASY and ACCURATE for you. No laborious cranking...No mechanical parts to get out of order...Only two binding posts for ALL tests. Several Models have A.C. and D.C. volt ranges, as well as low resistance ohmmeter.

This is an instrument that makes insulation resistance testing a "push-button" affair! Ask for more information.

WRITE FOR BULLETIN 2-A

ASSOCIATED RESEARCH, Incorporated
"Precision Instruments Since 1936"
3786 West Belmont Avenue • Chicago 18, Illinois
For more details circle NED-8264 on enclosed inquiry slip

FINGERS must be saved- KEEP THEM OUT OF PRESSES with LITTELL Pres-Vac

30 Pres-Vacs cost less than the average cost of only one press accident.

Operated by Compressed Air

SAFETY FEEDERS

- Blanks are fed from a distance of 14 inches
- Eliminates need of putting fingers under press ram

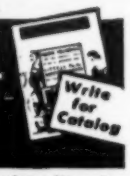
▶ BOOST PRODUCTION 20% TO 100% — Reported by users

▶ ELIMINATE DIE BREAKAGE — Assures Feeding Blanks One at a Time

▶ CUT INSURANCE COSTS — Fewer Accidents Mean Lower Premiums.

Littell Pres-Vac Safety Feeders are made in Single and Multiple types in a variety of cup sizes and styles.

F. J. Littell MACHINE CO. AIR DIVISION
4169 RAVENSWOOD AVE., CHICAGO 13, ILL.
— District Offices: Detroit and Cleveland —



▲ For more details circle NED-8265 on enclosed inquiry slip ▲

THE MATEER ELECTRIC FILLER HANDLES THEM ALL!

LIQUIDS · OILS · POWDERS · PASTES

COMBINED LIQUIDS AND SOLIDS

1/500 oz. to 2 Pounds
20 to 70 Per Minute
Up to 750° F

SAVE TIME AND MONEY WITH THE MATEER ALL ELECTRIC FILLING HEAD

Totally enclosed, manual or automatic. Accuracy as close as ±½%. Synchronize this self contained filling head with existing production lines and processing systems.

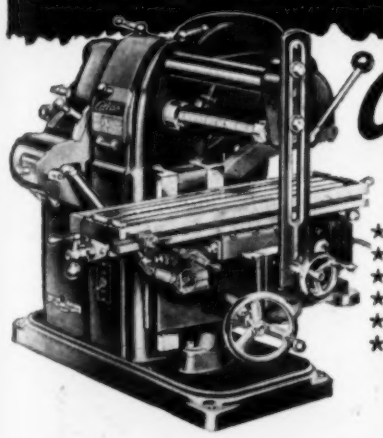
Jacketed and electrically heated hoppers available for handling cold and hot materials up to 750° F. Hot waxes, insulating compounds and asphalts handled without difficulty.

Send full information and samples of material to be tested. Write Dept. 105 for fully illustrated bulletin.

G. DIEHL MATEER & CO.
Lincoln Highway • Devon, Pa.

▲ For more details circle NED-8266 on enclosed inquiry slip ▲

DOUBLE SAVINGS ON SMALL PARTS MILLING!



Atlas MILLING MACHINE

★ Timken Bearing Spindle
★ Backgeared Power
★ Complete V-Belt Drive
★ 8 Spindle Speeds
★ 4½" x 18" Ground Table
★ Reversible Automatic Power Longitudinal Feed

1. Low initial cost. 2. Low operating costs.

The Atlas miller frees larger machines from uneconomical handling of small jobs. Saves many hours monthly on set-ups — saves on power and operating costs.

It handles the full range of operations, mills to close tolerances fast and efficiently — as dependably as larger machines.

Send today for detailed catalog. Here's real help — available promptly — for your tool room or production line.

50th YEAR Atlas ATLAS PRESS CO.
1023 N. PITCHER ST.
KALAMAZOO, MICHIGAN

▲ For more details circle NED-8267 on enclosed inquiry slip ▲

New Processes & Materials

FOAMED-LATEX FABRIC integrated with woven glass fiber

Any color foam rubber in gages of 1/16 to ¼ in. can be integrated with any type Fiberglas cloth to provide high tensile strength, flame resistant materials with stabilizing and cushioning action. Applications possible with foam-Fiberglas combinations include table tops and cushion pads for use under tablecloths, fire-retardant furnishings in theaters and public places and in aviation and general industrial fields. Materials can be furnished in 45 to 60-in. widths on continuous rolls up to 75 yd in length, and can be die or deck-cut, sewed, tacked or cemented to form end products. Made by **Andrews-Alderfer Processing Co.**, 128-2 Ash St., Akron 8, O.

▲ For more details circle NED-8268 on enclosed inquiry slip ▲

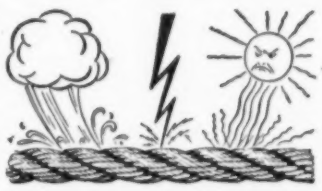
TRANSPARENT METAL COATING protects surface against tarnish

Usable on stainless steel, chrome plate and polished aluminum as well as on other polished and plated metals, formula EC-111 coating prevents corrosion. This transparent coating adheres well to properly prepared surface and will not reduce the original luster perceptibly. It will withstand corrosive action of atmospheric humidity, industrial smog and road salts. Intended for brush application, coating does not change color and is resistant to abrasion, shock and general wear. It is formulated with solvents which do not affect automobile finishes. It is not designed for use on copper, zinc or their alloys. Type EC-1139 sprayable coating is available also for general industrial use. Made by **Minnesota Mining & Mfg. Co.**, Adhesives & Coatings Div., Dept. NED, 411 Piquette Ave., Detroit 2, Mich.

▲ For more details circle NED-8269 on enclosed inquiry slip ▲

NONCONDUCTIVE MANILA ROPE has shock resistant qualities

Maximum dielectric and shock resistant qualities are safety factors developed in Se-Lectric Manila rope for protecting linemen and maintenance workers who face electrical hazards. Nonconductivity characteristics lie in rope's ability to "fight off water," as a result of chemicals used in its manufacture. In one test example where it required only 5.00 kv impressed on a piece of untreated ½-in. rope to produce 10 ma of current, it required 73.00 kv to force the same current through shock resistant rope of same size and length. Both ropes were showered with water for two hours before tests. Made by **South Eastern Cordage**, 650 N.B.C. Bldg., Cleveland 14, O.



▲ For more details circle NED-8270 on enclosed inquiry slip ▲

A Lot More for Your Glove $

in this New Extra-Duty Safety Line of PIONEER STANZOIL RED NEOPRENE

Coated Canvas Gloves

Exclusive Pioneer Non-Slip Grip Holds wet things as if dry.

Curved Fingers Extra comfort and efficiency.

Preflex-Palm Design Prevents wear from bunching.

Inserted Thumb Design No inside seam to wear through quickly.

Heavy Red Neoprene Coating Liquid-resistant, durable.

Entire Glove is full weight 8 oz. canton flannel Comfort, long wear.

Compare these new safety red neoprene coated canvas gloves with any others anywhere and you see the extra hand protection, extra wear, extra durability in oils and acids, extra work and efficiency only STANZOILS give you. For less cost-per-hour, more work-per-day, write for full information about these Extra-Duty STANZOIL neoprene coated canvas gloves, today. *The Pioneer Rubber Company, 634 Tiffin Road, Willard, Ohio.*

STANZOIL PIONEER

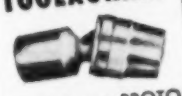
OVER 30 Years OF QUALITY GLOVE MAKING

▲ For more details circle NED-8271 on enclosed inquiry slip ▲

All eyes—even our Plion's—are on PROTO *professional* tools. Experts know that they speed work, add to safety and serve many long years. Buy from the extensive PROTO line at your dealer's. Send 10¢ for 68-page catalog to

PLOMB TOOL COMPANY
2275G Santa Fe Ave.,
Los Angeles 54, Calif.

TOOLAGRAM

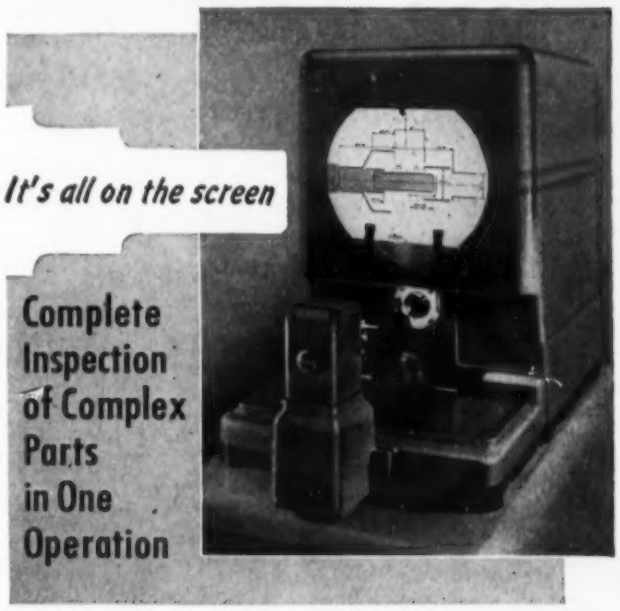


Revolutionary PROTO ball-type power universal sockets, 7475-7479, cling to the work better, operate more smoothly, are stronger and save more than conventional types.

5182

PROTO TOOLS LOS ANGELES

▲ For more details circle NED-8272 on enclosed inquiry slip ▲



Before investing in specialized gaging equipment that checks only a single item—perhaps even a single dimension of a single item—it's wise to investigate the Kodak Contour Projector. Very often you'll find that for a much smaller outlay it gives you faster, more accurate inspection, not on just one part now, but on a great many precision parts you may come up against later.

On a uniformly bright 14-inch screen requiring no hoods or curtains, the operator merely compares a magnified image with an overlaid tolerance outline which serves as a gage. One such "chart-gage" and work-holding fixture are all you need for complete inspection of a part, large or small, simple or complex. To switch to a different job, just insert a different chart and fixture. Little or nothing wears out. Little experience is required.

The Model 3 projector body, work stage, and lamp house come apart to accommodate big parts. Accessories provide vertical projection and examination of features that can't be silhouetted, even deep recesses.

For full information or a demonstration, write to Eastman Kodak Company, Industrial Optical Sales Division, Rochester 4, N. Y.

the KODAK CONTOUR PROJECTOR, MODEL 3

▶ $1290. List price, F.O.B. Rochester, N.Y., from ENGINEERS SPECIALTIES, Buffalo 9, N.Y.; magnification lenses and accessories extra. Price subject to change without notice.

Kodak TRADE-MARK

▲ For more details circle NED-8273 on enclosed inquiry slip ▲

RECORDERS
RECORD TIME - COUNT QUANTITY

Actuated by an electrical impulse . . . operates on the output of a scaler, photo tube, limit switch or any similar device. Records counts with relation to time and quantity on a roll of tape . . . automatically resets to zero.

In Radioactive Research, it saves precious man hours and results in greater economy and efficiency.

In Industry it maintains a permanent record automatically, recording production and time each hour.

Whatever your counting problems, our Engineering Department can adapt these Recorders to meet your particular need.

Write for interesting booklet SC15

SCALES
WEIGHT RECORDERS
HI-SPEED COUNTERS

FOUNDED 1888

STREETER-AMET COMPANY
4101 N. RAVENSWOOD AVENUE • CHICAGO 13, ILLINOIS

▲ For more details circle NED-8274 on enclosed inquiry slip ▲

CHECK CORROSION!

You can cut corrosion costs quickly and surely with TYGON PAINT—the liquid plastic. Easy to apply and fast drying, TYGON PAINT needs no more than normally good surface preparation. The dried film is tough, flexible and non-flammable. It's smooth, easy to clean and non-oxidizing. It resists virtually all acids, alkalies, oils, greases and waters.

Use it on tanks, pumps, motors, piping, miscellaneous equipment, structural steel, walls and ceilings.

201C

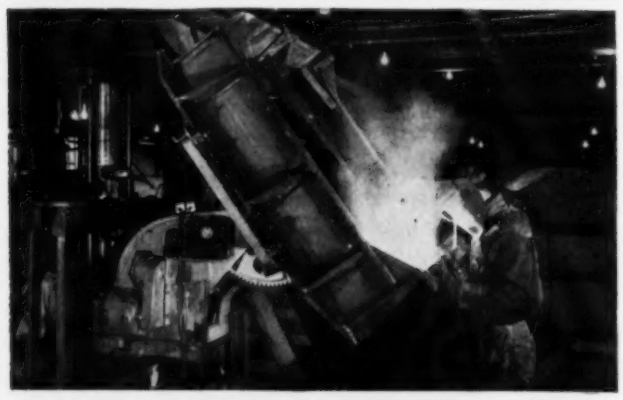
Write for Bulletin 720

PLASTICS and SYNTHETIC DIVISION

with TYGON PAINT

U. S. STONEWARE
AKRON 9, OHIO

▲ For more details circle NED-8275 on enclosed inquiry slip ▲



Less Walking—More Footage

Cut down waste welding time—increase footage up to 50%.

Use Worthington-Ransome Welding Positioners to tilt or turn the work—without delay.

No more walking around and climbing over the work piece, no more propping and flopping it. It's always in position for continuous downhand welding.

Welding Positioners: 100 lb to 30 tons capacity. Also Turning Rolls: 3 to 150 tons capacity, stationary or self-propelled.

Write for additional information to Worthington Pump and Machinery Corporation, Welding and Assembly Positioning Equipment Division, Dunellen, New Jersey.

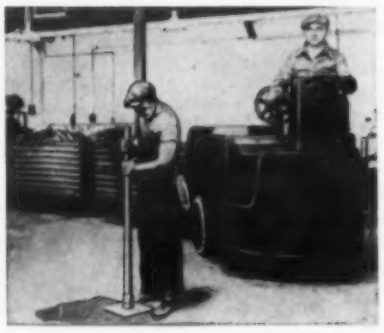
WORTHINGTON

Y.1.4

▲ For more details circle NED-8276 on enclosed inquiry slip ▲

New Processes & Materials

INDUSTRIAL FLOOR MATERIAL
natural rubber content adds to life



Pulverized natural rubber added to asphalt, rock limestone and cold asphalt emulsion imparts long life, reduced brittleness in subfreezing weather, good traction when wet and resistance to rutting to Immediate-Set industrial floor material. Resistance to loads, impact and shock is three times as great as for same material without rubber. Compound is suitable for large area resurfacing with layer as thin as ½-in. and for patching small damaged areas in interior or exterior locations. After rolling and tamping it can be used immediately. Material is factory mixed and requires no processing before use. Made by **Flash-Stone Co.,** 30 E. Rittenhouse St., Philadelphia 44, Pa.

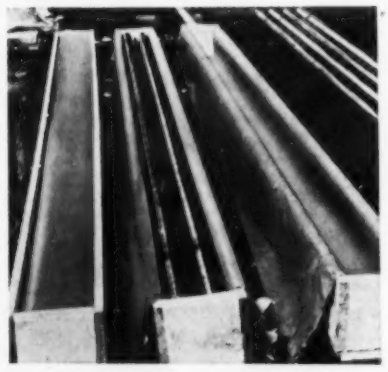
▲ For more details circle NED-8277 on enclosed inquiry slip ▲

CLEANING SOLVENT
cleans grease and removes carbon

Carburetors, fuel pumps, Diesel injectors, pistons, oil stainers and metal parts can be cleaned with synergistic di-phase solvent. Product comprises a water emulsion floating top layer which seals volatile lower layer chloraromatic solvent. Chemical can also act as replacement for critically short chlorinated solvents used in solvent distilling cleaning tanks. Direct contact with skin as well as danger of combustion is minimized by virtue of top water emulsion sealing of active lower layer. Both phases are water soluble and can be rinsed away as liquid soap. Produced by **Curran Corp.,** 88 S. Canal St., Lawrence, Mass.

▲ For more details circle NED-8278 on enclosed inquiry slip ▲

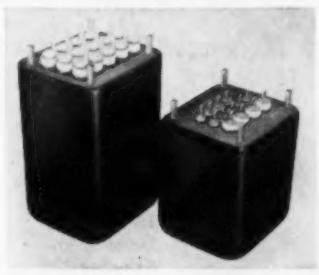
RUST-PREVENTIVE WRAPPER
developed for heavy products



Treatment of this heavy duty packaging paper with volatile type rust inhibitor adapts it for protection of heavy machinery and bulky metal parts during storage and shipping. Called Vapor Wrapper No. 120 Glas-Kraft grade, it is tough, resilient and tear-resistant, being made of two high strength kraft sheets cemented together and reinforced with spun glass fibers. Inner ply of kraft paper is impregnated with Callex volatile rust-inhibitor chemical. When metal product is wrapped in moisture and water repellent paper, vapor is released which prevents rust from forming. Available from **Nox-Rust Chemical Corp.,** 2429 S. Halsted St., Chicago 8, Ill.

▲ For more details circle NED-8279 on enclosed inquiry slip ▲

HIGH TEMPERATURE INSULATION
electrical type is silicone treated and has high dielectric strength



Developed for service at 180° C, Quinterra type 3 asbestos-base, silicone treated high temperature electrical insulation is class H type as defined by AIEE standards. Insulation is used for both inter-layer and wire wrapping insulation. It is adaptable to various electrical devices, including air-cooled, inert gas and silicone-filled transformers. Savings on materials, high safety factor and opportunity for more compact design are advantages. It maintains dielectric strength of at least 350 vpm under continuous exposure to class H maximum temperature of 180° C.

Good mechanical strength and physical properties are other characteristics. Quinterra type 3 is supplied in sheet, roll and tape forms from ¼ to 36 in. wide and from 3 to 9 mills thick. Use may be alone or with mica or glass cloth. Illustration shows similarly rated transformers made by Essex Wire Corp., with one at right using this silicone-treated insulation. Insulation made by **Johns-Manville,** Dept. NED-P2, 22 E. 40th St., New York 16, N. Y.

▲ For more details circle NED-8280 on enclosed inquiry slip ▲

IT'S THE BEST!

ROCKWOOD ball VALVES

Rockwood ball Valves are *best* because they last longer with no maintenance—are easy to open and close under pressure and will stay tight in a closed position. They handle many kinds of chemical fluids as well as abrasive or corrosive mixtures without injury to the seat or valve. Thousands of Rockwood ball Valves are giving continuous operation in chemical, food, paper, textile and other process plants, oil refineries and many other types of industries. Made in sizes from ½" to 4" for 300 p.s.i. working pressure. Write today for complete engineering data and prices.

Distributors in all principal cities.

ROCKWOOD SPRINKLER COMPANY
44 HARLOW STREET WORCESTER 5, MASS.

▲ For more details circle NED-8281 on enclosed inquiry slip ▲

Ten basic sizes with capacities from 30 Mbh to 490 Mbh. Totally enclosed motors.

nyb

COMET UNIT HEATER

Horizontal Type

Ceiling suspension type with heavy duty, welded steel, fin-and-tube heating element. (Extra heavy non-ferrous coils also available.) Suitable for continuous heating service on steam pressures up to 150 pounds or more.

Bulletin 513

Vertical, Projection Type Also Available

For efficient heating from high-ceiling areas—for door heaters over small openings—or where the horizontal type Comet Heater is not applicable. Ten basic sizes; capacities from 27 to 332 Mbh.

Bulletin 516

IUHA HEAT WITH UNIT HEATERS

THE NEW YORK BLOWER COMPANY
SALES OFFICES • 32nd STREET and SHIELDS AVENUE • CHICAGO 16
FACTORY, LAPORTE, INDIANA

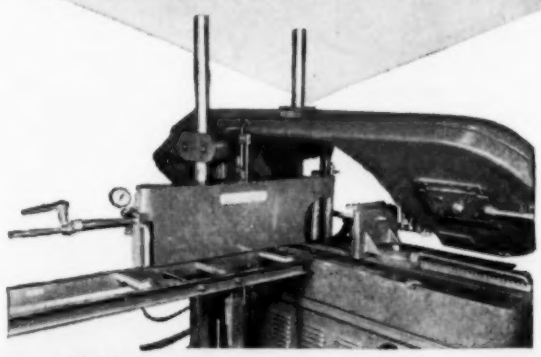
▲ For more details circle NED-8282 on enclosed inquiry slip ▲

For repetitive cutting...

THIS COMBINATION SAVES TIME AND MONEY

ANY quantity of identical lengths of bar stock are cut automatically in a Wells No. 12 Heavy Duty Metal Cutting Band Saw equipped with a Wells-O-Bar Feed Master.

In operation, the cutting head of the saw descends at a rate governed by a predetermined blade pressure setting. At the completion of each cut, the head automatically rises to a preset height and the stock is automatically projected for the next cut. The machine requires no attention except for reloading. Ask your Wells Dealer for complete information or write direct.



Wells SAWS

Products by Wells are Practical

METAL CUTTING BAND SAWS

WELLS MANUFACTURING CORPORATION
1313 HARDING ST., THREE RIVERS, MICHIGAN

▲ For more details circle NED-8283 on enclosed inquiry slip ▲

FOLD • SEAL • MAIL

Have You Filled In Your Name and Address?

FOLD TO THIS LINE

To obtain additional information on any items in this issue of NEW EQUIPMENT DIGEST, circle numbers below which correspond with those of desired items. Your request will be forwarded promptly to manufacturer. Please give your name, title, company and address. This postage-free mailer should be folded as indicated for mailing.

7550	7600	7650	7700	7750	7800	7850	7900	7950	8000	8050	8100	8150	8200	8250	8300	8350	8400	8450
7551	7601	7651	7701	7751	7801	7851	7901	7951	8001	8051	8101	8151	8201	8251	8301	8351	8401	8451
7552	7602	7652	7702	7752	7802	7852	7902	7952	8002	8052	8102	8152	8202	8252	8302	8352	8402	8452
7553	7603	7653	7703	7753	7803	7853	7903	7953	8003	8053	8103	8153	8203	8253	8303	8353	8403	8453
7554	7604	7654	7704	7754	7804	7854	7904	7954	8004	8054	8104	8154	8204	8254	8304	8354	8404	8454
7555	7605	7655	7705	7755	7805	7855	7905	7955	8005	8055	8105	8155	8205	8255	8305	8355	8405	8455
7556	7606	7656	7706	7756	7806	7856	7906	7956	8006	8056	8106	8156	8206	8256	8306	8356	8406	8456
7557	7607	7657	7707	7757	7807	7857	7907	7957	8007	8057	8107	8157	8207	8257	8307	8357	8407	8457
7558	7608	7658	7708	7758	7808	7858	7908	7958	8008	8058	8108	8158	8208	8258	8308	8358	8408	8458
7559	7609	7659	7709	7759	7809	7859	7909	7959	8009	8059	8109	8159	8209	8259	8309	8359	8409	8459
7560	7610	7660	7710	7760	7810	7860	7910	7960	8010	8060	8110	8160	8210	8260	8310	8360	8410	8460
7561	7611	7661	7711	7761	7811	7861	7911	7961	8011	8061	8111	8161	8211	8261	8311	8361	8411	8461
7562	7612	7662	7712	7762	7812	7862	7912	7962	8012	8062	8112	8162	8212	8262	8312	8362	8412	8462
7563	7613	7663	7713	7763	7813	7863	7913	7963	8013	8063	8113	8163	8213	8263	8313	8363	8413	8463
7564	7614	7664	7714	7764	7814	7864	7914	7964	8014	8064	8114	8164	8214	8264	8314	8364	8414	8464
7565	7615	7665	7715	7765	7815	7865	7915	7965	8015	8065	8115	8165	8215	8265	8315	8365	8415	8465
7566	7616	7666	7716	7766	7816	7866	7916	7966	8016	8066	8116	8166	8216	8266	8316	8366	8416	8466
7567	7617	7667	7717	7767	7817	7867	7917	7967	8017	8067	8117	8167	8217	8267	8317	8367	8417	8467
7568	7618	7668	7718	7768	7818	7868	7918	7968	8018	8068	8118	8168	8218	8268	8318	8368	8418	8468
7569	7619	7669	7719	7769	7819	7869	7919	7969	8019	8069	8119	8169	8219	8269	8319	8369	8419	8469

FOLD TO THIS LINE

7570	7620	7670	7720	7770	7820	7870	7920	7970	8020	8070	8120	8170	8220	8270	8320	8370	8420	8470
7571	7621	7671	7721	7771	7821	7871	7921	7971	8021	8071	8121	8171	8221	8271	8321	8371	8421	8471
7572	7622	7672	7722	7772	7822	7872	7922	7972	8022	8072	8122	8172	8222	8272	8322	8372	8422	8472
7573	7623	7673	7723	7773	7823	7873	7923	7973	8023	8073	8123	8173	8223	8273	8323	8373	8423	8473
7574	7624	7674	7724	7774	7824	7874	7924	7974	8024	8074	8124	8174	8224	8274	8324	8374	8424	8474
7575	7625	7675	7725	7775	7825	7875	7925	7975	8025	8075	8125	8175	8225	8275	8325	8375	8425	8475
7576	7626	7676	7726	7776	7826	7876	7926	7976	8026	8076	8126	8176	8226	8276	8326	8376	8426	8476
7577	7627	7677	7727	7777	7827	7877	7927	7977	8027	8077	8127	8177	8227	8277	8327	8377	8427	8477
7578	7628	7678	7728	7778	7828	7878	7928	7978	8028	8078	8128	8178	8228	8278	8328	8378	8428	8478
7579	7629	7679	7729	7779	7829	7879	7929	7979	8029	8079	8129	8179	8229	8279	8329	8379	8429	8479
7580	7630	7680	7730	7780	7830	7880	7930	7980	8030	8080	8130	8180	8230	8280	8330	8380	8430	8480
7581	7631	7681	7731	7781	7831	7881	7931	7981	8031	8081	8131	8181	8231	8281	8331	8381	8431	8481
7582	7632	7682	7732	7782	7832	7882	7932	7982	8032	8082	8132	8182	8232	8282	8332	8382	8432	8482
7583	7633	7683	7733	7783	7833	7883	7933	7983	8033	8083	8133	8183	8233	8283	8333	8383	8433	8483
7584	7634	7684	7734	7784	7834	7884	7934	7984	8034	8084	8134	8184	8234	8284	8334	8384	8434	8484
7585	7635	7685	7735	7785	7835	7885	7935	7985	8035	8085	8135	8185	8235	8285	8335	8385	8435	8485
7586	7636	7686	7736	7786	7836	7886	7936	7986	8036	8086	8136	8186	8236	8286	8336	8386	8436	8486
7587	7637	7687	7737	7787	7837	7887	7937	7987	8037	8087	8137	8187	8237	8287	8337	8387	8437	8487
7588	7638	7688	7738	7788	7838	7888	7938	7988	8038	8088	8138	8188	8238	8288	8338	8388	8438	8488
7589	7639	7689	7739	7789	7839	7889	7939	7989	8039	8089	8139	8189	8239	8289	8339	8389	8439	8489
7590	7640	7690	7740	7790	7840	7890	7940	7990	8040	8090	8140	8190	8240	8290	8340	8390	8440	8490
7591	7641	7691	7741	7791	7841	7891	7941	7991	8041	8091	8141	8191	8241	8291	8341	8391	8441	8491
7592	7642	7692	7742	7792	7842	7892	7942	7992	8042	8092	8142	8192	8242	8292	8342	8392	8442	8492
7593	7643	7693	7743	7793	7843	7893	7943	7993	8043	8093	8143	8193	8243	8293	8343	8393	8443	8493
7594	7644	7694	7744	7794	7844	7894	7944	7994	8044	8094	8144	8194	8244	8294	8344	8394	8444	8494

FOLD ON THIS LINE

7595	7645	7695	7745	7795	7845	7895	7945	7995	8045	8095	8145	8195	8245	8295	8345	8395	8445	8495
7596	7646	7696	7746	7796	7846	7896	7946	7996	8046	8096	8146	8196	8246	8296	8346	8396	8446	8496
7597	7647	7697	7747	7797	7847	7897	7947	7997	8047	8097	8147	8197	8247	8297	8347	8397	8447	8497
7598	7648	7698	7748	7798	7848	7898	7948	7998	8048	8098	8148	8198	8248	8298	8348	8398	8448	8498
7599	7649	7699	7749	7799	7849	7899	7949	7999	8049	8099	8149	8199	8249	8299	8349	8399	8449	8499

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—USE THIS SLIP FOR OCTOBER 1951 ISSUE ONLY—

101

NAME ..... TITLE .....

COMPANY .....

ADDRESS .....

CITY ..... ZONE ..... STATE .....

Principal Products Manufactured .....

..... Approx. Number of Employees in Plant .....

FIRST CLASS
PERMIT NO. 36
Sec. 34.9 P. L. & R.
Cleveland, Ohio

BUSINESS REPLY ENVELOPE
No Postage Stamp Necessary if Mailed in the United States

4c POSTAGE WILL BE PAID BY—

NEW EQUIPMENT DIGEST
Penton Building
CLEVELAND 13, OHIO

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Also send NEW EQUIPMENT DIGEST free to the following men in our company:

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NAME ..... TITLE .....

FASTER, EASIER DRAFTING

40% faster—actual tests prove

When you eliminate time wasted in picking up and laying down tools, you naturally draft faster, easier. Up to 40% faster if you're using a Bruning machine (as proved by actual tests).

Your Bruning drafter combines triangles, T-square, straightedge, protractor and scales, all in one precision instrument. Waste motions are cut to the bone — accuracy becomes both easy and *automatic*.

Other exclusive Bruning features naturally contribute: Touch Control Indexing, for example; or our "Equipoise" mechanism (the best gravity compensator ever devised for inclined board use). Get the details in our interesting descriptive booklet.

SEND TODAY for our free 20-page booklet A-1055. Use it as your standard of drafting machine values.

BRUNING

CHARLES BRUNING COMPANY, INC.
Dept. J-101A, 100 Reade Street, New York 13, N. Y.

For more details circle NED-8284 on enclosed inquiry slip

American Industry Ever Knew... *in Materials Handling Operations*

√ MOVES TONS OF YOUR PRODUCT AT THE TOUCH OF A BUTTON √ NEW "ARMORED" POWERHEAD DEFIES DESTRUCTION √ NOW SO COMPACT IT TURNS WITHIN ITS OWN SHADOW √ NEW MOTOR—SAME SIZE, BUT 20% MORE EFFICIENT

No wonder there are more Automatic Transporters in use today... than any other operator-led Electric Trucks!

Small wonder management is so enthused about cost-cutting "101" TRANSPORTERS. These mechanized cost savers not only speed production and boost shipments—they also eliminate back-breaking, old-fashioned hand handling—*actually release manpower for more productive work!* It doesn't matter whether you employ as few as 3 men in materials handling operations, the rugged "101" Transporter will save you money. Send for the facts today!

Trade Automatic Mark
61 W. 87th St., Dept. T-1
Chicago 20, Illinois

WORLD'S LARGEST EXCLUSIVE BUILDER OF ELECTRIC INDUSTRIAL TRUCKS

For more details circle NED-8285 on enclosed inquiry slip

IMAGINE the PEERLESS PACKET in Your Plant...

And you'll immediately visualize many advantageous operations for it . . . near and above machine tools, in your shipping department—in fact, in every shop area that can use up to a 2-ton spur geared hand hoist. The Peerless "Packet" is an "all 'round work-hoist", and combines lightweight features with steel for strength and absolute safety. Its extremely high operating efficiency is obtained through the use of prelubricated ball bearings, simplified gearing and improved friction mechanism. This combination of special features makes it possible to obtain maximum lifting capacity with minimum pulley efforts. To learn more facts about the Peerless "Packet", write today.

Write for Harrington's Bulletin P-5

THE HARRINGTON COMPANY
1650 W. CALLOWHILL ST.
PHILADELPHIA 30, PENNA.

HOIST MANUFACTURERS SINCE 1876

For more details circle NED-8286 on enclosed inquiry slip

New Processes & Materials

COILED STRIP METALS
various materials precoated in color

Adaptable to any number of industrial uses is Enamelstrip, offered in coils precoated in color and precision-slit to exact width. Coils are offered in cold rolled and electrogalvanized steel, electrolytic tin plate, brass, zinc and aluminum in any desired color or shade, with coating on one or both sides. Coating withstands stresses of drawing, bending forming and fabricating without cracking or peeling. Company will coat and slit its own or customer's metal to individual specifications. Offered by **Coated Coil Corp.**, 501-551 W. 30th St., New York, N. Y.

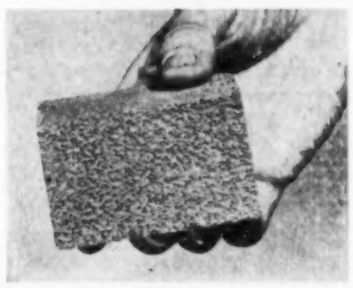
For more details circle NED-8287 on enclosed inquiry slip

PLASTIC MOLDING COMPOUND
impregnated with glass fiber

High impact strength, heat and chemical resistance are added to this transfer molding compound through incorporation of uniformly distributed fiber content. Called Dryply Pre-Imp, polyester preimpregnated glass fiber compound is usable with present molding techniques. It is supplied ready for use in standard compression and transfer molding equipment and has a shelf life of 6 months at normal room temperature. Made by **Flexfirm Products**, El Monte 2, Calif.

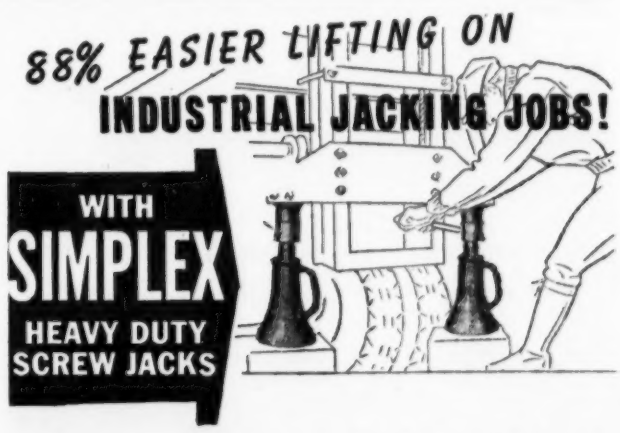
For more details circle NED-8288 on enclosed inquiry slip

FOAM CORE MATERIAL
has 14 lb per cu ft density



Able to withstand compressive pressure of 500 psi, Corfoam phenolic foam core material is of honeycomb appearance with tiny globular nonconnecting cells. It has a density of 14 lb per cu ft. Material is a liquid phenolic resin which, when mixed cold, will foam to hard consistency without applied heat at room temperature. It can be foamed in large masses without loss of cell control or undue shrinkage. Heat will not soften it. Good insulating characteristics and good adhesion to wood, paper and most plastics is claimed for noncombustible material. Sample kit with instructions is available for $5.00. Made by **Rezolin, Inc.**, Dept. N, 4825 W. Jefferson Blvd., Los Angeles 16, Calif.

For more details circle NED-8289 on enclosed inquiry slip



An entirely new principle on Simplex Screw Jacks cuts friction 88%—gives you faster, easier lifting. Concave inner surface of non-slip cap rests on large chrome-moly steel ball in hard steel ball-seat. Can't flatten under load. Cap has 9 degree self-leveling float—won't slip out under load.

Other features make these Simplex jacks safer on heavy-duty jobs. Tough, malleable iron housing. Broad malleable iron base for stability. Safety peephole in base. Color indicates jack capacity. High carbon steel bars 40% stronger than ordinary bars.

21 models with 4-way head—10 models with ratchet head. Capacities from 10 to 24 tons. Ask for new illustrated bulletin: Industrial 48.

Simplex
LEVER · SCREW · HYDRAULIC
Jacks

TEMPLETON, KENLY & CO.
1010 South Central Avenue, Chicago 44, Illinois

For more details circle NED-8290 on enclosed inquiry slip

GEARMOTOR

1. Helical, wear-hardened gears cut from alloy steel forgings and shaved before hardening for correct eccentricity and helical angle and bright, smooth surfaces—factors contributing to quiet operation and longer life.
2. Gear arrangement in simple train minimizes number of moving parts—promotes quietness.
3. Pinion and gear supported and spaced to reduce deflection—permits high load-carrying capacity.
4. Splash system with large oil reservoir assures constant and thorough lubrication of all parts.
5. Anti-friction bearing construction throughout.
6. Reliance *Precision-Built* Motors provide the maximum in dependable and economical power.

Write for GearMotoR (A-c. or D-c.) Bulletin E-2404

Sales Representatives in Principal Cities

RELIANCE ELECTRIC AND ENGINEERING CO.
1082 IVANHOE ROAD • CLEVELAND 10, OHIO

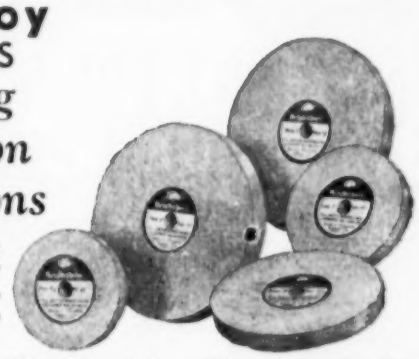
"All Motors are NOT Alike"

For more details circle NED-8291 on enclosed inquiry slip

MULTIPLE-USE, RUBBER-CUSHIONED

Brightboy ABRASIVES

widening production applications



- *Results show time savings up to 50%; burring, finishing, cleaning, polishing, in one operation*
- *Application versatility widened in working all metals, plastics, laminated materials, wood, glass*
- *Manufacturers of defense and civilian-use products, parts and assemblies benefit from new methods and applications.*

SAVES TIME: Bridges the gap between the rough grind and the buff. Works to close tolerances; can be shaped to contour. Produces a wide variety of conventional and special finishes and patterns; frequently the final polish. Requires no before-use preparation or dressing; no skilled labor to handle it.

SOME GENERAL USES: Removing light digs, tool and heat marks. Cleaning welded and soldered joints. Finishing dies and molds. Burring and finishing stampings, castings, machined and molded parts.

WELDON ROBERTS Brightboy

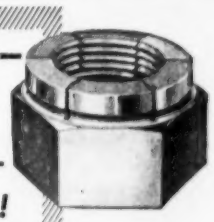
Ask your dealer about Brightboy. Write the Brightboy Service Department on any problems where light finishing and precision surfacing methods and production are involved.

BRIGHTBOY INDUSTRIAL DIVISION
WELDON ROBERTS RUBBER CO.
NEWARK 7 N. J.
America's Pioneer Manufacturers of Rubber-Bonded Abrasives

For more details circle NED-8292 on enclosed inquiry slip

A fastener AIN'T, *if—it works loose.*

The "FLEXLOC" IS—*because it won't!*



FLEXLOC®

ONE-PIECE, ALL-METAL
STOP- and LOCK-NUT

Its "chuck-like," resilient locking segments lock the "FLEXLOC" securely in any position on a threaded member with a controlled, uniform and dependable torque.

Tough applications demonstrate that the "FLEXLOC" positively "won't work loose", yet it can be removed easily with a wrench when desired. Because it is all-metal, temperatures as high as 550°F. hold no terrors for the "FLEXLOC."

The "FLEXLOC" has plenty of tensile . . . can be re-used many times . . . has therefore a long, effective life.

Write for further information and free samples.

SPS STANDARD PRESSED STEEL CO.
JENKINTOWN 24, PENNSYLVANIA

For more details circle NED-8293 on enclosed inquiry slip

HERE'S HELP FOR THE PLASTICS USER

▶ If you are looking for new ways and means to improve your product, and save money too, you'll want this new Taylor Catalog on Vulcanized Fibre, Phenol Fibre and Special Laminates. 48 fact-filled pages tell you how to design, plan and buy for maximum economy . . . show you how to machine Taylor materials . . . give you weights, specifications and properties. That's not all! A handy, easy-to-read selection chart makes picking the right material for your job a cinch! While you think of it, send for your free copy NOW. Just ask for Catalog 50 ND.

Taylor TAYLOR FIBRE CO. NORRISTOWN, PENNSYLVANIA LA VERNE, CALIFORNIA

▲ For more details circle NED-8294 on enclosed inquiry slip ▲

KLIXON Thermo-Snap Temperature Controls

Klixon Thermo-Snap Temperature Controls are widely used in both military and commercial applications in products ranging from tanks and aircraft to radio and electronic equipment, sterilizers and household appliances.

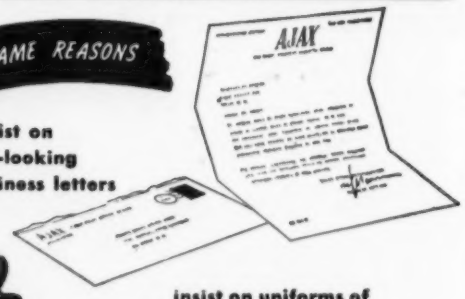
Actuated by the snap-acting Spencer Disc, these controls open the circuit with a quick, clean break . . . close the circuit with fast solid make. Their accurate, sensitive operation is best able to withstand shocks, vibration, altitude or motion.

Klixon Thermo-Snap Controls are available in many types and ratings including hermetically sealed units. Our engineers will gladly help you with your temperature control problems. Write for their help and information, today.

KLIXON SPENCER THERMOSTAT Division of Metals & Controls Corp. 1910 Forest St., Attleboro, Mass.

▲ For more details circle NED-8295 on enclosed inquiry slip ▲

FOR THE SAME REASONS you insist on smart-looking business letters



insist on uniforms of

REEVES QUALITY FABRICS

They wear longer and they stay smart looking—that's why leading companies specify uniforms of Reeves Fabrics. For Reeves Fabrics are made of fine *combed* cotton, Sanforized*, and vat-dyed in colors fast to sun, water and perspiration.

Write for full information.

* *Residual shrinkage less than 1%*

Reeves ARMY TWILL — Reeves CLEARCREEK POPLIN — Reeves PARADE TWILL

REEVES BROTHERS, Inc., 54 Worth Street, New York 13, N. Y.

▲ For more details circle NED-8296 on enclosed inquiry slip ▲

New Processes & Materials

PHOSPHORESCENT SIGNS retain afterglow 8 to 12 hours

Phosphor - treated Geon polyvinyl plastic is now available in laminated form for use as direction or safety signs inside buildings blacked out from bombing attack or power failure. Signs retain afterglow from 8 to 12 hours, are visible from 15 to 20 ft and cannot be seen from the air. Printed in block letters of green, black, or red, with blue-white phosphorescent background, they are noninflammable and nonwarping and will last two years. Stock models bear legends such as "shelter," "exit" and "zone," but signs with other directions or instructions can be made to order. They are available with adhesive backs or with grommets for sticking or hanging on walls. Made by **Norco Products Mfg. Co.**, Dept. NE-PL, 392 Bleecker St., New York 14, N. Y.

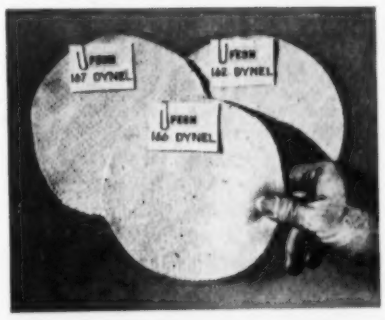
▲ For more details circle NED-8297 on enclosed inquiry slip ▲

INDUSTRIAL SKIN CREAMS repel irritating liquids

Dermatitis and other skin irritations are reduced through use of either Skin-Cote No. 1 or No. 3 industrial hand creams. No. 1 repels oils, solvents, thinners and other water insoluble organic liquids. Aqueous solutions, water soluble oils and organic liquids soluble in water are repelled by No. 3 cream. Liquid that is repelled forms droplets and runs off skin. Irritating materials suspended in liquids are deposited on barrier layer film and do not contact skin. Creams are easily removed with soap and water. Made by **Boyer-Campbell Co.**, 6540 St. Antoine St., Detroit 2, Mich.

▲ For more details circle NED-8298 on enclosed inquiry slip ▲

FILTER FABRICS resist acids, bases and salts

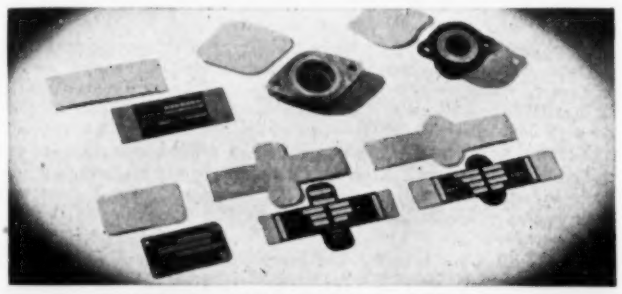


Dynel, a spun-staple fiber spun from vinyon-N, a copolymer of vinyl chloride and acrylonitrile, is now available in two filter fabrics — Feon 166, a twill weave, and Feon 167, a broken chain weave. Material is unaffected by most concentrated mineral acids; resists wide range of organic acids, bases and salts; and can be used at temperatures up to 250° F. Resilient texture of spun-staple construction makes fabrics seal easily in press frames with minimum rim pressures. Filter cloths are available as yard goods or tailored to fit any type pressure or vacuum, centrifuge or dry filtration equipment. Made by **Filtration Engineers, Inc.**, Filtration Fabrics Div., 155 Oraton St., Newark 4, N. J.

▲ For more details circle NED-8299 on enclosed inquiry slip ▲

MASKING TAPES & GASKETS are precut to any size or shape

Quick masking of plates, dials, gages, machined parts, holes and threads for cleaning, painting, plating or buffing operations is facilitated with handy self-adhesive,



precut Quik-Masks. Made from Scotch brand pressure-sensitive masking tapes, masks come precut to exact size and shape as ordered and are mounted either on cards, several to a card, or individually with each mask having its own folded liner on adhesive side. Made by **W. H. Brady Co.**, Dept. 334, 16 E. Spring St., Chippewa Falls, Wis.

▲ For more details circle NED-8300 on enclosed inquiry slip ▲

THE FAMOUS MULTIFORM BENDER CUTTER

Produces Without Special Tooling — Saves Die Costs Saves on Expensive Presses

The illustration at the left shows just a few pieces produced on our famous Multiform Bender-Cutter. This efficient machine is useful in all lines of trade.

NO. 5 AIR MODEL

See Us Booth H-154 Metal Show Detroit

ALSO BUILT IN LARGER SIZES

HAND OPERATED MODELS AVAILABLE

FIVE-IN-ONE-TOOL IT BENDS FLAT AND ROUND STOCK INTO ANY SHAPE. CUTS AND PUNCHES FLAT STOCK

J. A. RICHARDS CO. MYRTLE & PITCHER STS. KALAMAZOO, MICHIGAN

▲ For more details circle NED-8301 on enclosed inquiry slip ▲

CONTROLLED VOLUME PUMPING

Complete Details Here . . .

This 24-page, 2-color Bulletin No. 151 is filled with details such as these: how Controlled Volume Pumps are used in diversified industries and in instrumentation, pilot plants, laboratories; how Milton Roy Controlled Volume Pumps readily handle difficult-to-pump materials such as slurries, viscous liquids, solids in suspension, etc.; features that make these pumps perform flawlessly on services where no other pump has filled the need; four pages of color charts showing with traffic light clarity the relative corrosion resistance of materials of construction to over 170 chemicals.

This kind of information, and much more, is yours for the asking. Write today for your free copy of Milton Roy Bulletin No. 151.

MILTON ROY COMPANY 1304 E. MERMAID LANE • PHILADELPHIA 18, PA.

▲ For more details circle NED-8302 on enclosed inquiry slip ▲

Tape triples life of work gloves!

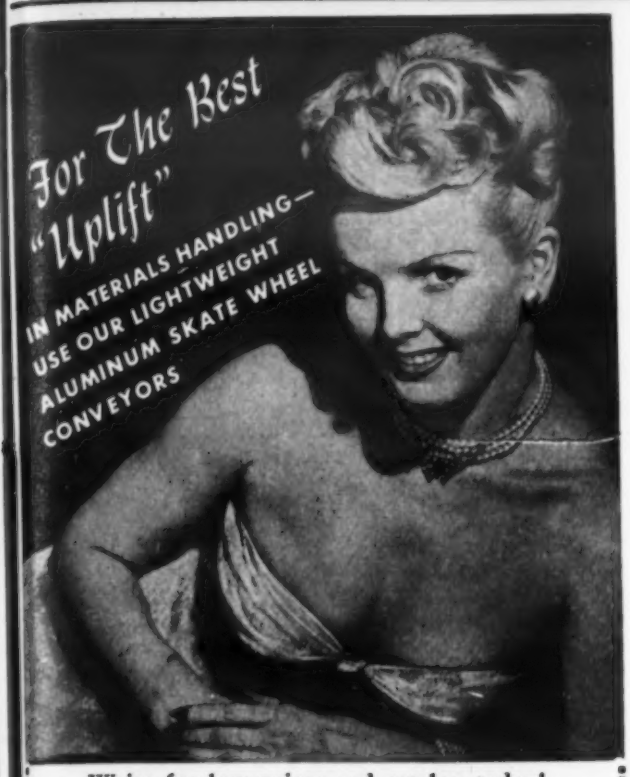
In the picture above, *Polyken* tape No. 133 is being used to triple the working life of a work glove! Mather Spring Company used to mend its 15,000 pairs of workers' gloves by hand sewing. Now *Polyken* No. 133 does the job faster, easier, better! Sticks to any surface as well as its own. Resists abrasion, solvents, and moisture.

Ask your *Polyken* distributor or write for free folder, "Tape is a Tool." Address *Polyken*, Dept. NEK, 222 W. Adams St., Chicago 6.

Nº 133 — ONE OF THE NEW . . . Polyken® INDUSTRIAL TAPES TAILORED TO YOUR JOB

POLYKEN Industrial Tape, Department of Bauer & Black, Division of The Kendall Company

▲ For more details circle NED-8303 on enclosed inquiry slip ▲

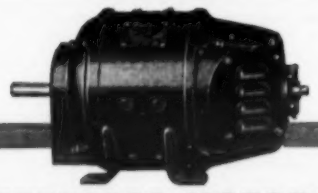


Write for low prices and catalog today!

GEE-VEE-LINE, OAKS 3, PA.

Manufactured by HASLETT CHUTE AND CONVEYOR CO.

For more details circle NED-8304 on enclosed inquiry slip



ALL PEERLESS MOTORS ARE

"Peerless Registered"

MORE than 90% of all Peerless Motors are custom manufactured to meet the specific operating requirements of the equipment with which they are to be used. So we "Peerless Register" every motor before shipment. The words "Peerless Registered" are a trademark, recorded in the U.S. Patent office. Only Peerless Motors can bear this phrase, and only Peerless Motors offer you this protection. This registration record is assurance to both you and your customer that the Peerless Motor has been properly designed for your equipment so as to give best possible performance and long, satisfactory service. And the registration record makes possible the quick identification of any Peerless Motor—anywhere.

THE PEERLESS ELECTRIC CO., WARREN, OHIO

Manufacturers of Quality Motors Since 1893

Single Phase • Polyphase • Direct Current • ¼ to 15 H.P.

Peerless-Electric MOTORS·FANS·BLOWERS

For more details circle NED-8305 on enclosed inquiry slip

NEW *Commander* DRILL CHIP BREAKER

Get these COMMANDER DRILL CHIP BREAKER benefits now:

- Faster Drilling
- Deeper Holes
- Better Holes
- Longer Drill Life
- Safer, Cleaner Work
- REDUCED DRILLING COSTS

Your nearby COMMANDER Distributor has the Drill Chip Breaker. Write for his name, full details and illustrated circular.

See us at Booth A-159
National Metal Show, Detroit
October 15th to 19th

ORDINARY CHIPS

CHIP BREAKER CHIPS

Commander MFG. CO.

4220 W. Kinzie Street • Chicago 24, Illinois

Product of *Commander* Builder of Production Tools

For more details circle NED-8306 on enclosed inquiry slip

New Processes & Materials

HIGH-TEMPERATURE INSULATION withstands 1800° F temperatures

Essential physical properties of Refrasil fibrous silica insulation in batt, cloth, cordage, sleeve and tape forms include high chemical and temperature resistance. Other properties are low thermal conductivity, effective acoustical insulation, fiber diameter of 0.00020 to 0.00040-in., specific heat of 0.19, nominal thickness of 3/16-in. and surface density of 0.05-psf. Originally developed to protect personnel and jet-propelled aircraft structure against extreme temperatures, insulation has potential use for electric space separators, filtration of corrosive or hot materials, catalyst or catalyst support, ion exchangers, flexible insulation blankets and Refrasil-plastic laminates. Made by **H. I. Thompson Co.**, Dept. N, 1733 Cordova St., Los Angeles 7, Calif.

For more details circle NED-8307 on enclosed inquiry slip

RUST PREVENTIVE COMPOSITION is additive for oils and waxes

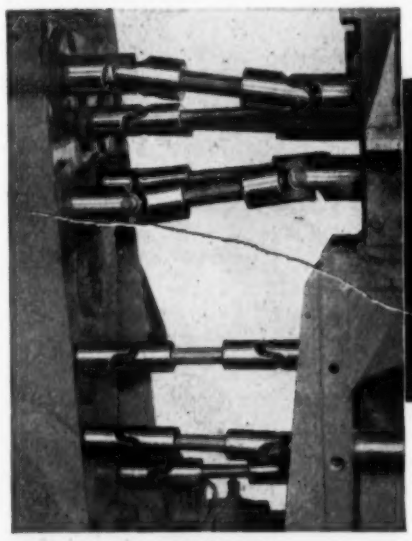
Due to its inherent polar activity, Petrobase 210 synthetic rust preventive composition causes oils and waxes to displace water from metal surfaces preferentially, when used in small quantities. This property also prevents redeposition of aqueous vapors or liquids on metal surface. Composition offers high humidity protection, acidic emulsion or solution displacement and salt water immersion and spray protection. Uses include government specification preservative oils and compounds; industrial preservative or "slushing" oils; lubricants for small motors, tools and appliances; and water displacement fluids. Made by **Pennsylvania Refining Co.**, Butler, Pa.

For more details circle NED-8308 on enclosed inquiry slip

POLYVINYL CHLORIDE MATERIAL in sheet, bar, tube and powder forms

Capable of being welded, machined and formed, Lucoflex nonplasticized polyvinyl chloride is offered in rigid sheets, tubes, bar stock and molding powder. It does not age and is resistant to almost all acids, alkalies and many special chemical solutions. Water vapor will not permeate material which is unaffected by temperatures between plus 177 and minus 50° F. It has about same tensile strength as aluminum although weighing about one-half as much. Uses include tanks, tank liners, ducts and piping. Industrial products made from material by **Van Dorn Iron Works Co.**, Lucoflex Div., 2683 E. 79th St., Cleveland 4, O.

For more details circle NED-8309 on enclosed inquiry slip



BOSTON HEAVY DUTY UNIVERSAL JOINTS

There are sixteen BOSTON UNIVERSAL JOINTS (2 to 8 HP, 180 to 275 R.P.M.) on this massive Yoder Down Coiler for 2000 lb. brass coils.

Yoder Down Coiler Drive

For dependable performance, specify BOSTON Gear UNIVERSAL JOINTS

ALL PARTS INTERCHANGEABLE

Stocked by 80 Authorized Boston Gear Distributors — One Near You.

For stock sizes, prices and HP ratings, see Boston Gear Catalog No. 55. Free copy on request.

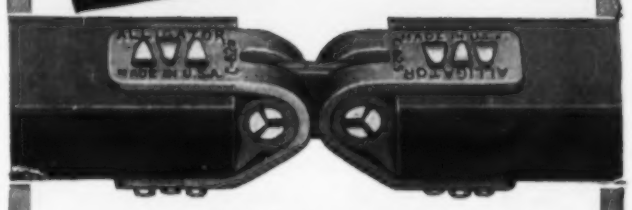
BOSTON GEAR WORKS

69 HAYWARD ST., QUINCY 71, MASS.

For more details circle NED-8310 on enclosed inquiry slip

Now you can fasten V-belts by using

ALLIGATOR V-BELT FASTENERS



- Alligator V-Belt Fasteners and open-end (long length) V-belting in rolls will enable you to make up multiple V-belt drives for a wide variety of applications.

Available for B, C and D sizes of V-belting.
Not to be used for repairing endless cord V-belts.
Bulletin V-211 will give you complete details. A copy mailed on request.

Order from your supply house

FLEXIBLE STEEL LACING COMPANY

4664 Lexington St., Chicago 44, Illinois

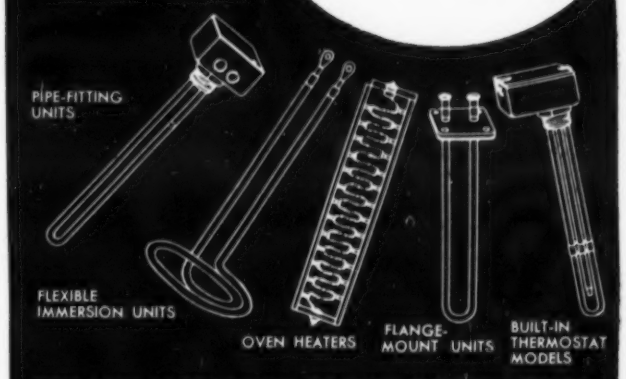
Also sole manufacturers of Alligator Steel Belt Lacing for flat conveyor and transmission belts and FLEXCO Belt Fasteners and Rip Plates for fastening and repairing conveyor belts.

For more details circle NED-8311 on enclosed inquiry slip

THERMALINK Electric HEATING ELEMENTS

OVER 600 STANDARD MODELS & TYPES

IMPROVE YOUR ELECTRICALLY HEATED PRODUCTS AND EQUIPMENT WITH THERMALINK ELEMENTS



SPECIALISTS IN CORROSION-RESISTANT IMMERSION HEATERS

Write Dept. N for Literature

ELECTRO-THERM INC.

8024 GEORGIA AVE., SILVER SPRING, MD.

For more details circle NED-8312 on enclosed inquiry slip

NO MUSCLE MEN NEEDED!

RED GIANT Hydraulic Hand PALLETRUCK

Good-bye to grunts and groans! This powerful hydraulic pallet lift truck is easy to push, easy to pull. Slide planes lift or lower forks for smooth entry into or exit from double faced pallets. Handle pumping is simple . . . quick . . . takes little effort. Model shown has two-ton capacity. One-ton Red Giant Palletruck also available. Fill in coupon for fact-packed bulletin. Do it now!

BULLETIN

RE-100

REVOLVATOR CO.

Designers and Manufacturers of Material Handling Equipment

8732 TONNELE AVE., NORTH BERGEN, N. J. • SINCE 1904

Without obligation, please send bulletin on Red Giant Palletrucks

Name .....

Position .....

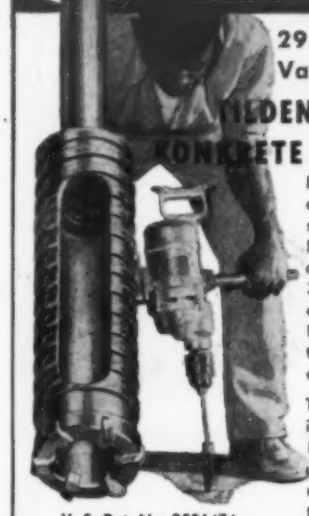
Company .....

Address .....

For more details circle NED-8313 on enclosed inquiry slip

The World's Most Efficient

CONCRETE DRILL



29 Std. Sizes — Wide Variety in Drill Shanks

TILDEN ROTARY KONKRETE KORE DRILLS

Revolutionary Tilden Drills available in 29 standard sizes, from 3/16" to 4". Larger sizes to 8" in diameter and lengths up to 36" made to special order. A variety of shank lengths and fittings make these drills versatile and efficient.

TOP PERFORMANCE: 200 inches of concrete drilled before resharpening—drills glass, flat steel and rock in concrete—drills up to 6 inches per minute—makes straight clean holes—uses ordinary electric drills for fast, quiet cutting action.

U. S. Pat. No. 2506474

Write now for illustrated catalog on Konkrete Kore Drills—the world's most efficient.

Tilden Tool
MANUFACTURING COMPANY

Branch Offices: 209 LOS MOLINOS • SAN CLEMENTE, CALIF.
1995 N. Fair Oaks, Pasadena 3, Calif. • 144 W. Washington Blvd., Chicago 7, Ill.

For more details circle NED-8315 on enclosed inquiry slip

DRY AIR *Costs Money* • **LOOK AT** *This* →

Dry air will pick up moisture from hygroscopic materials causing weight loss and deterioration. This is far more expensive than installing Armstrong Steam Humidifiers to maintain the proper moisture content of the materials you are processing. Dry air causes static electricity—often a production nuisance, frequently a dangerous fire hazard. Dry air reduces worker efficiency, causes respiratory disorders. Armstrong Steam Humidifiers are the answer! Less than one cent per day operating cost per 1,000 cu. ft. Automatic, trouble free, accurate.

The cracked, worthless shoe sole at the left was made from dried out leather. At the right—perfect and pliable, thanks to Armstrong Humidifiers.

Ask for educational BULLETIN 1773 for complete data. ARMSTRONG MACHINE WORKS, 819 Maple St., Three Rivers, Michigan.

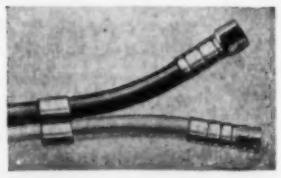
ARMSTRONG *Steam* **HUMIDIFIERS**
Easy to Install and Maintain . . . Automatic . . . Economical

For more details circle NED-8316 on enclosed inquiry slip

TWO HOSES...ONE LINE!

TWIN-WELD HOSE SPEEDS WELDING STOPS TANGLING

Patented Twin-Weld® combines a green oxygen line and a red acetylene line molded into one compact unit. No more dangerous, tangled separate hoses . . . the operator has one neat, flexible, non-kinking line that makes his job safer, faster, more efficient. Especially useful in close-quarter work. Call your Hewitt Rubber distributor, or write Hewitt Rubber Division, 240 Kensington Avenue, Buffalo 5, N. Y.



HEWITT-ROBINS INCORPORATED

For more details circle NED-8317 on enclosed inquiry slip

New Processes & Materials

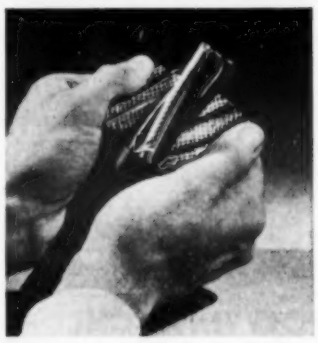
HEAT REFLECTING CLOTH
protects personnel from radiant heat

Personnel and equipment can be protected from high radiant heat and other high temperatures with Ray-Foil Laminated Foil-Cloth, a flexible, protective material that reflects heat as a mirror reflects light. Cloth can be used as curtain or drape, as a shield to be carried, a heat or glare baffle or as a stand shield. It is also effective when used for aprons, insoles, gloves and clothing accessories. Under tests in which cloth was used to block radiant heat of 2000° F, temperature on protected side registered only 100° F. Cloth is available in 100-yd x 3 ft-rolls, cut lengths 3 ft wide, tape in 2-in. x 72-yd rolls, and on 48 x 72-in. Spa-Fla shield. Made by **Safety First Supply Co.**, 423 Magee St., Pittsburgh 19, Pa.

For more details circle NED-8318 on enclosed inquiry slip

MULTICONDUCTOR CABLE
resists crush and moisture damage

Suited for mining or machine control is moisture-resistant multiconductor control cable employing open - weave, Neoprene-treated Fiberglas cloth. Fiberglas is slit into tape and wrapped around conductors as they are stranded to hold them in proper relative positions under outer jacket. During extrusion of jacket, porosity of open-weave Fiberglas permits free flow of rubber into valleys between conductors. Glass yarn reinforcement is also used in cable's rubber center filler. Cable resists crush, deformation and moisture damage, and there are no loose particles to foul individual conductors. It is obtainable with any multiple conductor assembly from **General Electric Co.**, 1285 Boston Ave., Bridgeport 2, Conn.



For more details circle NED-8319 on enclosed inquiry slip

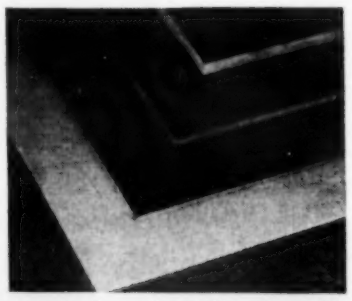
WRAPPING TWINE
has core of glass fiber strands

Equal uniformity of strength and minimum of stretch are characteristics embodied in Colcord G twine constructed of Kraft paper twisted around core of Fiberglas strands. Produced in seven sizes from No. 12 to No. 60, twine is used for same general wrapping and packaging applications as polished cotton twine. In the cores, each Fiberglas strand is made up of 204 individual glass filaments, with 12 to 38 strands used per core in various twine sizes. Made by **Columbian Rope Co.**, Allied Products Div., Auburn, N. Y.

For more details circle NED-8320 on enclosed inquiry slip

PLASTIC SHEET MATERIAL
is glass-fiber reinforced

Having punching and machining qualities similar to brass, type A3A glass-fiber reinforced plastic sheets retain properties characteristic of glass-polyester plastic. Material is available in ⅛, 3/16 and ¼-in. thicknesses, and has tensile strength of 11,900 psi, compressive strength of 14,300 psi and impact resistance of 10.3 ft-lb. Chemically resistant to acids, salts and mild alkalies, as well as most organic solvents, plastic has water absorption of 0.39 per cent. Electrical properties include dielectric strength of 325 v per mil, arc resistance of 120 seconds and power factor of 4.24. Dielectric constant is 4.83 and specific gravity is 1.38. Made by **Dynakon Corp.**, 5511 Hough Ave., Cleveland 3, O.



For more details circle NED-8321 on enclosed inquiry slip

IN WIRE-MESH PRODUCTS LET JELLIFF DO IT!

For 70 years we've been weaving Wire Mesh. And a good part of that time we have also been making things of Wire Mesh for people who find it is cheaper, easier and generally more satisfactory to "let Jelliff do it."

From big Dipping Baskets to tiny precision filters — from fuel strainers to what-is-it gadgets — JELLIFF's Custom Production Department turns out fabricated Wire-Mesh products at speed, price and precision that mean lower costs and a stronger competitive position for our many customers.

If you buy or make wire-mesh assemblies as components of your own products and have not yet had an estimate from Jelliff, write today for details. No obligation, even if you enclose a blueprint for us to figure on. Address Department 11.

THE C. O. JELLIFF MFG. CORP.
DIPPING BASKETS · LEKTROMESH · RESISTANCE WIRE · SOUTHPORT
WIRE MESH PARTS · WIRE CLOTH · STRAINERS • FILTERS · CONNECTICUT
WIRE PRODUCTS SINCE 1860

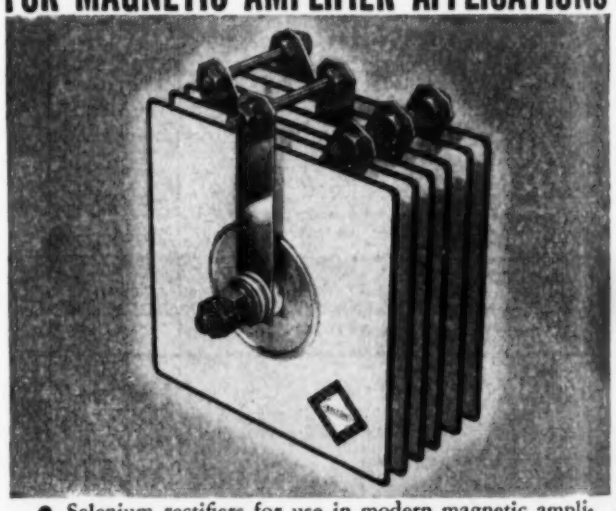
For more details circle NED-8322 on enclosed inquiry slip

The NEW Belcon

BALANCED WATTAGE

SELENIUM RECTIFIERS

WILL MEET YOUR EXACTING REQUIREMENTS FOR MAGNETIC AMPLIFIER APPLICATIONS



● Selenium rectifiers for use in modern magnetic amplifiers, must have special rectifier characteristics in order to achieve the maximum results when used with the newer grain oriented toroidal cores.

Belcon Balanced Wattage Rectifiers are manufactured to have these special characteristics: They have a very much higher forward to reverse-current ratio — as high as fifteen hundred to one or better; they have a low forward-voltage drop — usually as low as 1.2 volts per cell.

Belcon also manufactures a complete line of Rectifiers for industrial applications as well as specialized Rectifiers to fit unusual applications. Such units are frequently smaller in size and therefore may cost less than the standard line due to the exclusive Belcon Balanced Wattage principle.

WHY BALANCED WATTAGE

Belcon employs a variable blocking voltage — current density ratio resulting in a balanced wattage rectifier. A Belcon Rectifier processed to block 40 volts rms, for example, will deliver 1 ampere; the same size rectifier processed to block but 20 volts rms will deliver 2 amperes or more.

BELCON RECTIFIERS

Division of Bogue Electric Manufacturing Company
55 IOWA AVENUE • PATERSON 3, N. J.

Bogue — SINCE 1892 SPECIALISTS IN FINE MOTORS & GENERATORS

MAGNETIC AMPLIFIERS
MAGNETIC CONTROLLERS
AC & DC MOTORS
AC & DC GENERATORS
VOLTAGE & SPEED REGULATORS
SWITCHBOARDS

BELCON

For more details circle NED-8323 on enclosed inquiry slip

The Famous Sutton MOTOR DRIVEN PRESSURE BLOWER

ORDERED BY EVERY BIG NAME IN THE COUNTRY!

THREE SIZES ¼, ½, 1 H.P.

USED FOR EXHAUSTING DUST, SMOKE, FUMES, VAPOR . . COOLING AND DRYING . . CONVEYING COTTON, WOOL, SHAVINGS . . FORGE BLASTING

MADE OF LIGHTWEIGHT CAST ALUMINUM ALLOY to reduce weight and increase strength. CENTRIFUGAL TYPE. Delivers even, nonpulsating flow of air. Universal as to rotation and discharge. Direction of discharge may be changed to any of eight 45 degree positions. Straight wall construction reduces windage and increases efficiency. Standard 3450 r.p.m. direct-connected 60-cycle ball bearing motor, open or totally enclosed types. Capacities, 100 to 800 cu. ft. per min. at static pressures from ½" to 6".

WRITE FOR LITERATURE AND PRICES

Sutton Manufacturing Corp.

26 WEST WILSON AVE. NORFOLK, VA.

▲ For more details circle NED-8324 on enclosed inquiry slip ▲

Machine "down-time" cut 40% with HYPRESSURE Jenny STEAM CLEANER

Your machines are back in production almost twice as fast, if they are Hypressure JENNY steam cleaned before repairs! Actual time studies show that up to 40% of the costly time of skilled mechanics is lost fighting grease and dirt.

Hypressure JENNY not only saves precious time, but pays plus dividends in stepped-up production, fewer lost-time accidents, lower fire-insurance premiums, and increased personnel efficiency.

Write for complete information about this modern aid to increased production. There's no obligation; so why not do it now?

There is a Hypressure Jenny Steam Cleaner for every Mill . . . Mine . . . Factory . . . Farm and Automotive need

Distributors in all parts of the world — For local representative see classified Telephone Directory

HYPRESSURE JENNY DIVISION

HOMESTEAD VALVE MANUFACTURING CO.

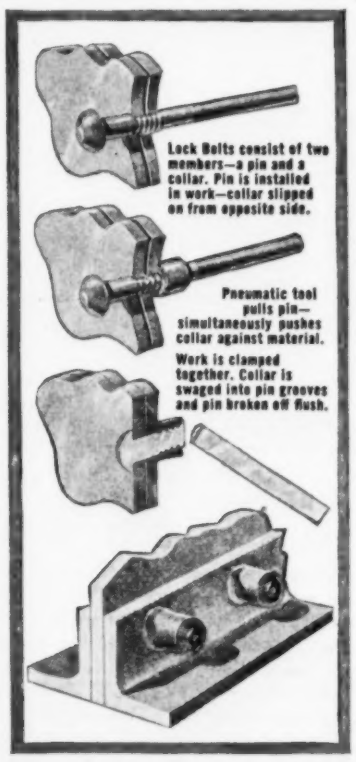
Serving since 1892

P.O. BOX 84 CORAOPOLIS, PA.

▲ For more details circle NED-8325 on enclosed inquiry slip ▲

Cherry Rivet Company

Lock Bolts combine the advantages of bolts and rivets



Learn why Lock Bolts, the new high strength, structural fastener, *weigh 50% less* than same sized AN bolt yet offer *equal tensile strength* and *greater shear strength*. See how Lock Bolts slash installation time. Fact-packed data sheet sent free on request. Address Dept. J-113.

Cherry Rivet Company | A Division of Townsend Company

231 WINSTON STREET • LOS ANGELES 13, CALIFORNIA

▲ For more details circle NED-8326 on enclosed inquiry slip ▲

New Literature and Catalogs

Air & Hydraulic Devices

Logansport Machine Co.—Do's, don'ts and what to look for phases of setting up and servicing air and hydraulic devices are found in reprinted booklet "The Facts of Life on Air and Hydraulic Devices."

▲ For more details circle NED-8327 on enclosed inquiry slip ▲

Incentive Prizes

Belnap & Thompson, Inc.—52-page catalog lists and illustrates 1635 brand-name products available to companies as incentive and efficiency prizes. A 16-page prize selector insert, supplemented quarterly, lists some 300 "most wanted" items on which delivery is guaranteed in 90 days.

▲ For more details circle NED-8328 on enclosed inquiry slip ▲

Bench Welding Heads

Federal Tool Engineering Co.—Line of Tweezer-Weld bench heads for small parts welding is featured in 8-page bulletin No. 253. Shown are heads of great diversity, single pair and double pair electrodes for two simultaneous welds and those with automatic wire feed and cut off arrangements.

▲ For more details circle NED-8329 on enclosed inquiry slip ▲

Fluorescent Fixtures

Mitchell Mfg. Co.—Specifications for all models, dimensional diagrams, coefficients-of-utilization tables and distribution curves of Dynalite line of 82 job-rated industrial fluorescent units are offered in catalog No. 438. Available accessories are included.

▲ For more details circle NED-8330 on enclosed inquiry slip ▲

Centrifugal Sump Pumps

Warren Steam Pump Co.—Type VS and VN centrifugal sump pumps available in wet and dry pit types are described in 8-page bulletin WQ-220 along with sectional views, impeller designs, dimensions and selection tables. Pumps handle liquids and sewage, and are made in 1½ to 8-in. sizes with capacities to 2000 gpm for heads to 120 ft.

▲ For more details circle NED-8331 on enclosed inquiry slip ▲

Stainless Steels

Allegheny Ludlum Steel Corp.—On-the-job reference data on approximately 40 different types of stainless steel is presented in 120-page, clothbound "Stainless Steel Handbook." It covers each type from standpoints of analyses, fabrication, heat treatment and special conditions of service. Tables aiding selection and covering corrosion resistance are featured.

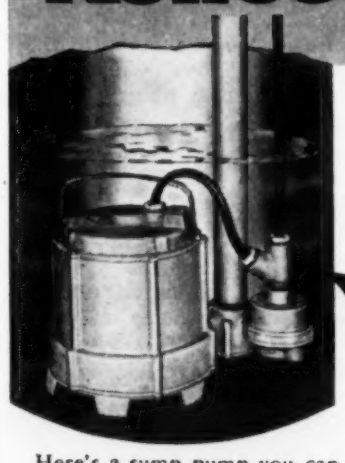
▲ For more details circle NED-8332 on enclosed inquiry slip ▲

Cellular Glass Insulation

Pittsburgh Corning Corp.—24-page illustrated booklet tells about "Foamglas Insulation for Piping and Process Equipment." It lists properties, typical data for cold, intermediate and hot applications, details for insulating tanks, ducts, removable covers and tank heads, as well as accessory materials. Sizes and shapes of insulation are tabulated.

▲ For more details circle NED-8333 on enclosed inquiry slip ▲

Kenco SUMP PUMPS



Require no maintenance

INSTALL IT ...FORGET IT

Here's a sump pump you can install and forget. Can be connected in a few minutes. Requires no maintenance . . . no oiling or greasing. Revolutionary in design, Kenco bronze pumps are fully submersible. Order a Kenco today.

- ★ No maintenance necessary—fully automatic—nothing to oil.
- ★ Installed in a jiffy—weighs only 50 pounds.
- ★ Submersible—ideal for those hard to fit spots.
- ★ Amazing capacity—3300 G.P.H.
- ★ No shafts to bind or bearings to wear—all bearings run in oil.
- ★ Motor hermetically sealed in oil to eliminate failure from overloading.
- ★ Waterproof motor cannot be damaged if power fails.

P109A Model $89.50 . . . Write for folder.

BEST FOR UTILITY PURPOSES

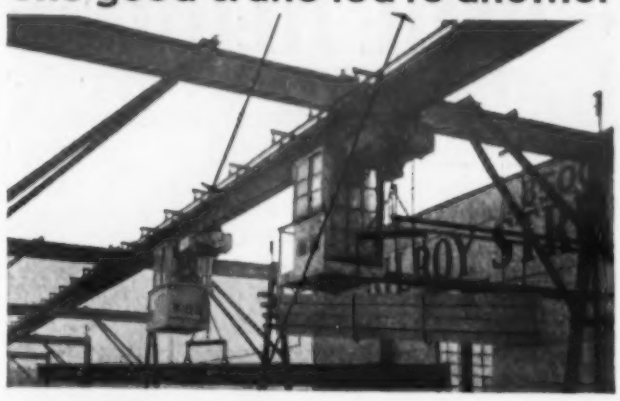
Kenco INC.

Dept. N, 1125 North Ridge Road • Lorain, Ohio

SUMP • UTILITY • CIRCULATING • BILGE

▲ For more details circle NED-8334 on enclosed inquiry slip ▲

one good crane led to another



...at Kilroy Structural Steel Co.

of Cleveland, Ohio, who installed a 5-ton Robbins & Myers enclosed cab traveling crane to handle raw steel and prefabricated components in their storage yard three years ago. When they needed another crane —they simply reordered "R & M".

Moving 125 tons of steel is an ordinary days work for this R & M team, and in a recent 3-day period, with assists from 16 two-ton hoists inside the plant, handled 400 tons of steel from raw stock through fabrication and to transport for the customer!

Kilroy's manager, Mr. McGreal, says R & M equipment gives lower cost, fast, efficient handling;—stays on the job with only routine maintenance despite rugged all weather use. Even if your biggest load never tops 500 lbs. it will pay you to take it up with Robbins & Myers. Your nearby R & M representative has full details on time and cost saving overhead handling that will successfully answer your needs. Write for Bulletin No. N101D.

TAKE IT UP WITH ROBBINS & MYERS INC

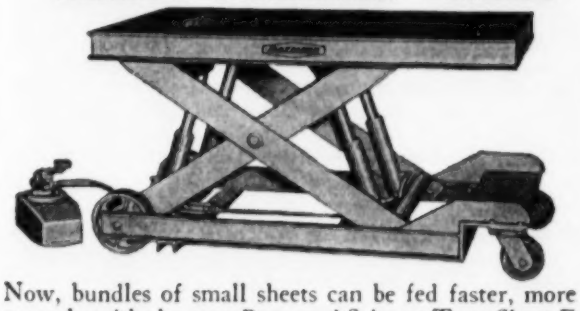
HOIST AND CRANE DIVISION, SPRINGFIELD 99, OHIO

▲ For more details circle NED-8335 on enclosed inquiry slip ▲

NEW WAY to FEED Thick BUNDLES of SHEETS

RAYMOND

Hydraulic Scissors-Type SHEET FEEDING TABLE



Now, bundles of small sheets can be fed faster, more accurately with the new *Raymond* Scissors-Type Sheet Feeding Table.

Only 66" long, it has a scissors-type lifting mechanism that elevates the top from 18" to 36", enabling it to hold thick bundles for feeding. Top can't sag under off-center loads because it's supported at four points by Hydraulic rams.

With *Raymond* Scissors-Type Sheet Feeding Tables, manual lifting is banished — the operator merely slides sheets to presses, shears or brakes. Single speed foot pump or power operated pump raises table. Capacities: 6,000 or 10,000 lbs.

FREE BULLETIN. Send for Bulletin 261, Supp. 3—it gives complete details.

RAYMOND

Formerly LYON-Raymond Corporation

ELECTRIC INDUSTRIAL TRUCKS • HYDRAULIC ELEVATING EQUIPMENT

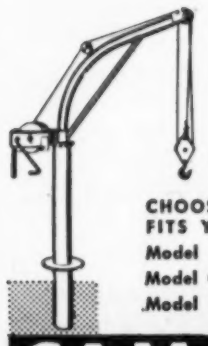
The RAYMOND CORPORATION

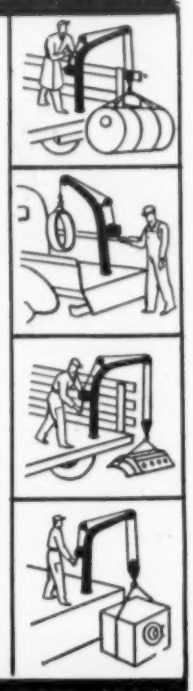
4155 SpaceMaker St., Greene, N. Y.

▲ For more details circle NED-8336 on enclosed inquiry slip ▲

BLUE HERON
TRUCK CRANE SAVES..
TIME • MONEY • LABOR

ONE MAN can handle up to ONE TON easily with BLUE HERON TRUCK CRANE—and with greater safety! Crane swivels through full circle and can be lifted from socket by one man—leaving truck body clear. Many operators equip all trucks with sockets, change cranes from truck to truck as needed. Simple to install!

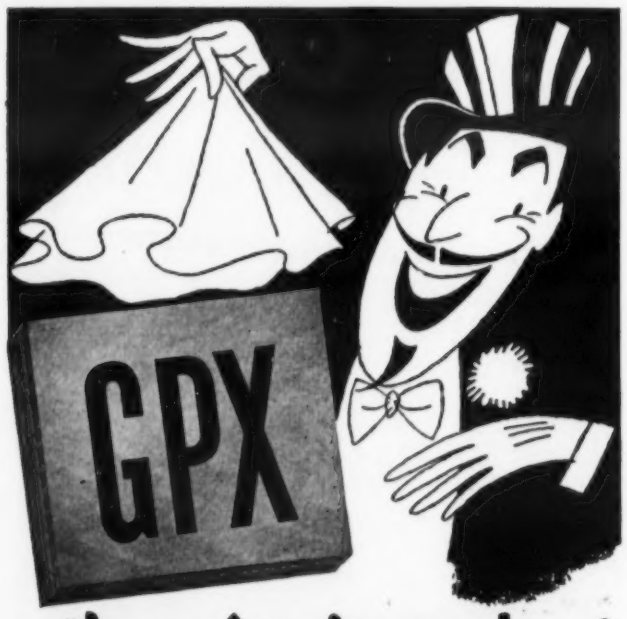




CHOOSE THE MODEL WHICH FITS YOUR REQUIREMENTS
Model O.C.30A Cap. 500 lbs.
Model O.C. 30B Cap. 1000 lbs.
Model O.C.30C Cap. 2000 lbs.

CAM TOOL COMPANY, INC.
288 22nd STREET • OAKLAND 12, CALIF.

For more details circle NED-8343 on enclosed inquiry slip



the miracle-worker!

GPX—Georgia-Pacific's plastic-faced plywood, is performing production miracles . . . GPX versatility is apparent as new applications of this unique product are discovered.

GPX combines the strength and durability of plywood and the armor-hard surface properties of plastic. The plastic overlay is applied under heat and pressure at the time the plywood is being bonded. Result: the plastic flows, condenses and sets, forming a hard plastic surface that *is part of the plywood itself.*

GPX is incomparable for concrete forms . . . GPX has made the revolutionary Unicel box car a reality . . . GPX's flawless surface and its resistance to wear makes it superior to other materials for foundry match plates. GPX is the perfect material for tables, counters, and most work surfaces.

The GPX Use Folder will aid you in determining where Georgia-Pacific's GPX can solve your construction and production problems. Send for this booklet and see what miracles GPX can perform for you.

GEORGIA—PACIFIC PLYWOOD COMPANY

OFFICES OR WAREHOUSES IN: Augusta, Birmingham, Boston, Chicago, Columbia, Louisville, Memphis, Nashville, Newark, Olympia, Orlando, Philadelphia, Pittsburgh, Portland, Raleigh, Richmond, Savannah.

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Plastic Plywood Division
Marsh Street
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Please send me the GPX Use Folder.
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FIRM ADDRESS.....
CITY.....STATE.....
POSITION.....

For more details circle NED-8344 on enclosed inquiry slip

New Literature—Continued

Heating Equipment
Sta-Warm Electric Co.—Line of compound, asphalt and wax heating equipment, melters, dispensers and pressure installations is discussed in 6-page illustrated bulletin No. 042W. Dimensions and capacities ranging from 1 qt to hundreds of gallons are listed. Other units, such as agitators, wax droppers and heaters for glue, solder and plastic sealing are also covered.

For more details circle NED-8345 on enclosed inquiry slip

Tool Control
Remington Rand Inc.—Three-way control of tools, jigs and dies is described in illustrated folder called, "Seven Ways to Save With Simplified Tool Crib Control." Two basic systems are described, Kolect-A-Matic and Kardex, depending on amount of detail desired. Carboned triplicate form, filled in once by worker upon withdrawing tool, provides form for inventory, record of missing or damaged tools and record of withdrawals.

For more details circle NED-8346 on enclosed inquiry slip

Conduit & Cable Fittings
Thomas & Betts Co.—64-page bulletin No. 65 provides complete and easy-to-find listing of electrical conduit and cable fittings for all types of raceways. Included are locknuts, bushings, elbows, pipe straps, conduit supports, connectors and couplings for rigid conduit, EMT, armored cable, nonmetallic sheathed cable, service entrance cable and fittings, ground equipment, floor and junction boxes, tublets and bending tools. Illustrated contents table and grouping of material according to raceway served aid in quick identification.

For more details circle NED-8347 on enclosed inquiry slip

Spray Mask Finishing
Thierica Studio—Production methods and techniques for spray mask painting of decorative designs, toys, emblems, nameplates, control knobs and indicator plates on plastics, die castings and metal stampings is subject of 6-page illustrated folder "Nickel-Formed Spray Masks." Information covers five basic masks with description of how, when and where they apply.

For more details circle NED-8348 on enclosed inquiry slip

Steam Traps
Yarnall-Waring Co.—24-page bulletin T-1740 illustrates and describes line of steam traps for power plants, steam distribution systems, steam processes and marine service. Bulletin presents information on advantages, workings, applications and typical installations as well as numerous listings of prices, weights, dimensions and specifications. Flanged and integral-strainer traps plus screwed strainers are also covered.

For more details circle NED-8349 on enclosed inquiry slip

Spectrometers
Titan Metal Mfg. Co.—Featured in booklet "Control—the Key to Improvement in Quality Products" is the Quantometer, a direct reading spectrometer capable of giving automatically complete and accurate analyses of brass and bronze alloys in few minutes. Other methods for fabricating brass and bronze rods, forgings, die castings, welding rods and wire are illustrated and described.

For more details circle NED-8350 on enclosed inquiry slip

Metal Stamping
Leake Stamping Co.—"How Modern Stamping Techniques Can Help Conversion" is title of 27-page booklet which presents a discussion on the background, problems and advantages of today's metal stamping methods. Photographs show wide variety of conversion stampings as compared to the original forged or cast items.

For more details circle NED-8351 on enclosed inquiry slip

Grinders & Arbors
Poly Products—8-page illustrated catalog contains information on line of ball bearing bench grinders, arbors, sanding disks and face plates. Included are specifications, dimensional diagrams and application suggestions for saw and adapter arbors in building variety of special production tools.

For more details circle NED-8352 on enclosed inquiry slip

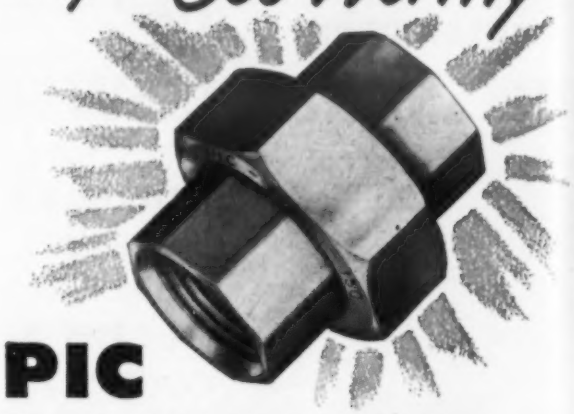
Springs
Dudek & Bock Spring & Mfg. Co.—Variety of coil springs, wire forms and metal stampings is shown in 4-page illustrated folder entitled, "How to Keep Springing Costs Down." Chart tabulates coil spring manufacturing variations.

For more details circle NED-8353 on enclosed inquiry slip

Temperature Conversion
Stevens Mfg. Co.—8¼ x 11½-in. reference chart printed on stiff plasticized board and punched for use in 3-hole binders lists conversion temperatures from minus 70° to plus 650° either Fahrenheit or Centigrade. Reverse side tabulates major types of thermostats, their applications and general performance characteristics.

For more details circle NED-8354 on enclosed inquiry slip

Theyre See Worthy



PIC
STEEL UNIONS Look Well . . . Wear Well on Original Equipment

100% Zinc Plated . . . good looking . . . strong, the Pic 150# steel union is "tailor-made" for makers of original equipment. Ends are uniformly flat-sided for faster installing with open-end wrenches. They can take severe wrenching because they're made from steel pipe coupling stock. Special wedge-type bronze seat locks the union tight — the complete zinc plating (threads too) provides secure protection from rust. Best of all — a Pic costs *less* than a galvanized, *no more* than a black malleable union.

Write for Free Samples!

DART UNION COMPANY
132 THURBERS AVENUE, PROVIDENCE 5, R. I.

For more details circle NED-8355 on enclosed inquiry slip

Pneumatractor

The Schramm Model 105 Pneumatractor is a self-propelled tractor-compressor combination that fills many requirements, and will . . .

- **PUSH . . . .** Anything a Wheel Tractor will Push
- **PULL . . . .** Anything a Wheel Tractor will Pull
- **POWER . . .** Anything a Wheel Tractor will Power
- **PROVIDE AIR . . .** For Every Compressed Air Job

Write for Bulletin NEU-51

SCHRAMM INC. THE COMPRESSOR PEOPLE WEST CHESTER PENNSYLVANIA

For more details circle NED-8356 on enclosed inquiry slip

One OF A LINE...
FOR ARMED FORCES
COMMUNICATIONS...
"GUARD-A-SEAL" CONTROLS »»

SERIES 795 D.C. TELEPHONE TYPE RELAY

Name your need—"Guard-A-Seal" relays to fly the mighty B-47 or a tiny sub-miniature control assembly; jet fighter flight switches or switches for vending control; mechanisms for a giant big-league scoreboard or a compact liquid level control—get them all at GUARDIAN. Over 35,000 standard parts to speed orders—plus a TOP ENGINEERING STAFF to solve "special problems". The Series 795 D. C. is available in Lug Header containers and to specifications in A.N. Connector, Screw Terminal or Octal Plug housings. Also obtainable with open mountings. Write.

GUARDIAN ELECTRIC
1626-L W. WALNUT STREET CHICAGO 12, ILLINOIS
A COMPLETE LINE OF RELAYS SERVING AMERICAN INDUSTRY

For more details circle NED-8357 on enclosed inquiry slip

INDUSTRIAL INTERCOM ANY PLANT CAN USE TO SAVE TIME, MONEY. PROMOTE SAFETY

WHEELER

Sound Powered TELEPHONES

- NO BATTERIES
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- NO ELECTRICAL HAZARD
- NO MAINTENANCE

LOW FIRST COST • EASILY INSTALLED • STRONG CLEAR SIGNAL

THE WHEELER INSULATED WIRE COMPANY, Inc.
Division of the Sperry Corp.
1108 EAST AURORA ST., WATERBURY 20, CONN.

For more details circle NED-8358 on enclosed inquiry slip

HOUGHTON COSMOLUBE multi-purpose grease

Saves money, time and inventories

- Only one grease to buy
- Resists high temperatures
- Pumps easily below zero
- Insoluble—water resistant
- Adheres to metal—less leakage
- Simplifies selection

WRITE FOR BULLETIN

ONE perfect grease for . . . hot spots, cold spots and wet spots!

E. F. HOUGHTON & co. PHILADELPHIA 33, PA.

For more details circle NED-8359 on enclosed inquiry slip

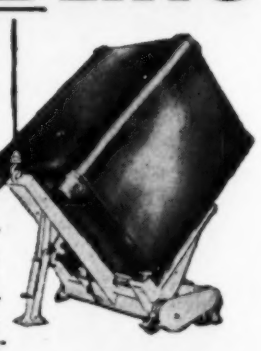
TOTE SYSTEM* TAKES THE "HAND" OUT OF MATERIAL HANDLING

TOTE SYSTEM has proved the most revolutionary solution to bulk material handling problems since the birth of the barrel. Gleaming 74 cu. ft. aluminum TOTE BINS, together with simplified filling and discharging equipment, comprise the TOTE SYSTEM*.

Ordinary methods of handling bulk materials are completely outmoded by the modern TOTE SYSTEM.

TOTE assures these outstanding advantages: elimination of sources of contamination and deterioration; prevention of rodent and insect infestation; elimination of losses due to spilling, breaking and sifting; and retention of original product quality.

Every day, more progressive industries are gearing their bulk materials handling problems to the TOTE SYSTEM, stepping up production and reducing handling costs to a minimum by saving time, handling, space, and container cost.



Write us today for detailed, illustrated information on the TOTE SYSTEM.

*Both TOTE and TOTE SYSTEM Reg. U. S. Pat. Off.

Address all inquiries to Dept. H

TOTE SYSTEM, INC.
720 So. 7th St. BEATRICE, NEBRASKA

For more details circle NED-8360 on enclosed inquiry slip

New Literature—Continued

Adhesive & Sealers

Minnesota Mining & Mfg. Co., Adhesives & Coatings Div.—3M brand sealing compounds that meet over 30 federal, military, army, navy and air force specifications are listed in 10-page pocketsize booklet No. 2. Included are adhesives for sealing caseliners and fiberboard boxes, bonding rubber to metal, installing insulation materials and general-duty use; coatings for sound deadening, aircraft walkways and label-overcoating; and sealers for aircraft fuel tanks and pressure cabins, mask filters and boat deck seams.

For more details circle NED-8361 on enclosed inquiry slip

Power Tools

Boice-Crane Co.—48-page catalog illustrates and describes line of power tools for cutting, shaping, drilling and finishing wood, metal, fiber, and plastics. Among machines covered are jointers, planers, band saws, contour saws, drill presses, band filers, grinders, jig saws, lathes, belt sanders, spindle sanders, shapers, tilting-arbor saws and saw jointers.

For more details circle NED-8362 on enclosed inquiry slip

Properties of Polyethylene Resins

American Agile Corp., Plastics Div.—8-page engineering data folder presents comprehensive summary of physical and chemical properties of polyethylene resins, sold by company as Agilene.

For more details circle NED-8363 on enclosed inquiry slip

Foreman Training

Lester B. Knight & Associates, Inc.—Foreman training, its advantages, how it pays for itself, what it accomplishes and how it is rendered is discussed in 6-page booklet entitled, "What Foreman Training Means to Production and Profits."

For more details circle NED-8364 on enclosed inquiry slip

Flooring Problems Analyzed

Stonhard Co.—Where to look for and how to correct bad floor conditions is subject of 32-page illustrated pocket-size booklet "Over the Rough Spots". It tells how to protect concrete and wood floorings and maintain proper repair.

For more details circle NED-8365 on enclosed inquiry slip

Stock Room Ladders

Ballymore Co.—Safety Step ladders of all-steel construction and with from one to eight steps are subject of 6-page folder. Ladders have casters which carry them when not in use. Weight of person causes rubber-tipped legs to engage floor, preventing rolling.

For more details circle NED-8366 on enclosed inquiry slip

Economical Steam Use

Sarco Co.—Consisting of 16 questions and 16 answers, all in "shirt-sleeve" English, this 8-page booklet No. 2171 "How Increasing Your Steam Costs Can Save Money" offers helpful information regarding efficient use of steam.

For more details circle NED-8367 on enclosed inquiry slip

Spray Booth Air Filters

Research Products Corp.—"If You Spray Paint, We Can Help You" is title of 12-page illustrated booklet which describes how Paint Arrestors can offset difficulties encountered in installation and maintenance of paint spray booths. Typical installations are described and illustrated. Arrestors cut original, labor, material and down-time costs while improving efficiency.

For more details circle NED-8368 on enclosed inquiry slip

Circuit Breaker Panelboards

Westinghouse Electric Corp.—Circuit breaker panelboards, safeguards that protect electrical equipment against shorts and overloads, yet minimize circuit interruption and outages, are described in 20-page illustrated booklet B-5260. Equipment for lighting, appliances and other power applications and circuits that supply them are covered.

For more details circle NED-8369 on enclosed inquiry slip

Heat—A Precision Tool

Selas Corp. of America—16-page illustrated bulletin S-6.3 "Precision Tools for Production" outlines importance of heat processing machines as automatically controlled precision tools in production lines. Processes covered include metal brazing, selective hardening, heating for forging, tinplate fusion, melting, normalizing, glass sealing, oil and paint processing and filter production.

For more details circle NED-8370 on enclosed inquiry slip

Hydraulic Cylinders

Commercial Shearing & Stamping Co.—56-page illustrated catalog H-3 gives features, specifications and applications of line of double-acting, single-acting, telescopic and special hydraulic cylinders. Details of different types of mountings, style of fittings, ratings and other information are covered.

For more details circle NED-8371 on enclosed inquiry slip

Combined PNEUMATIC TOOL SUSPENSION AND AIR SUPPLY

HOSE which supplies air suspends pneumatic tool directly over the work spot, always handy. Tool is counterbalanced by spring tension of reel. Releasing tool lifts it automatically to convenient position. No cable suspension, no dangerous loops of loose hose to cause accidents. Speeds up production, lessens fatigue, reduces tool maintenance cost, saves hose.

SEE YOUR JOBBER OR WRITE

Wayne THE WAYNE PUMP COMPANY
FORT WAYNE 4, INDIANA • TORONTO

INDUSTRIAL HOSE REELS
FOR AIR, WATER, FLUID LUBRICANTS AND COOLANTS

For more details circle NED-8372 on enclosed inquiry slip

For ACCURATE Performance and HIGH Production . . .

USE MOTCH & MERRYWEATHER Master-Cut SLITTING and SLOTTING SAWS

Less breakage with Dual-Drive!

Better, but no higher priced—M. & M. Master-Cut slitting saws. Strong tooth form. Ample side clearance and flat hub avoid binding. Firm clamping, accurate cutting. Exclusive Dual Drive or conventional key drive.

See your local dealer for quick service.

THE MOTCH & MERRYWEATHER MACHINERY CO.
PENTON BUILDING • CLEVELAND 13, OHIO

COMMAND OUR UNPARALLELED EXPERIENCE IN CIRCULAR SAWING

For more details circle NED-8373 on enclosed inquiry slip

TEMPILSTIKS°

the amazing Crayons that tell temperatures

in
WELDING
FLAME-CUTTING
TEMPERING
FORGING
CASTING
MOLDING
DRAWING
STRAIGHTENING
HEAT-TREATING
IN GENERAL

$2 each

gives up to 2000 readings

it's this simple:
- Select the Tempilstik° for your working temperature.
- Mark your workpiece with it.
- The Tempilstik° will leave a liquid mark as soon as its specified temperature is reached.

Available in these temperatures (°F)

113	213	313	450	850	1250	1650
125	225	325	500	900	1300	1700
138	238	338	550	950	1350	1750
150	250	350	600	1000	1400	1800
163	263	363	650	1050	1450	1850
175	275	375	700	1100	1500	1900
188	288	388	750	1150	1550	1950
200	300	400	800	1200	1600	2000

Also available in pellet and liquid form.

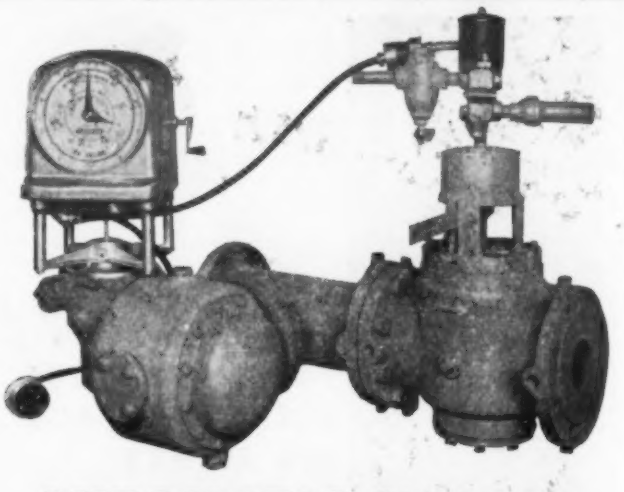
TEMPIL CORPORATION
132 W. 22nd St., New York 11, N. Y.

FREE—Tempil° "Basic Guide to Ferrous Metallurgy"—16¼" by 21" plastic-laminated wall chart in color. Send for sample pellets, stating temperature of interest to you.

NAME _____
COMPANY _____
ADDRESS _____

Booth C-117-National Metals Show Detroit, October 15-19.

For more details circle NED-8374 on enclosed inquiry slip



AUTOMATIC VALVES
for hard-to-reach places

Automatically operated jacketed valves, which have long been used with H & B Fluidometer metering systems, are now available for use where remote control is required without automatic batching features. See typical application above.

Valves of either straight, 3-way plug cock, or straight globe type are available for steam, air or hydraulic operation. These valves provide the solution to many problems of actuating valves in hard-to-reach places.

Write for Bulletin Fl-49.

HETHERINGTON & BERNER INC.
751 Kentucky Ave. Indianapolis 7, Ind.

▲ For more details circle **NED-8375** on enclosed inquiry slip ▲

ELIMINATES unpleasant clean-up **JOBS**

CUTS COSTS AS MUCH AS 96%

. . . cleans instantly . . . cleans better

WHATEVER your clean-up job is, you can save time and money with the Sellers Hi-Pressure Jet Cleaner. One man in a few minutes can do the work of a whole crew. Even without chemicals, the Sellers Jet will instantly remove sticky or encrusted matter from floors, tanks or processing machinery.

FOR FACTS ON MODERN CLEAN-UP METHODS...SEND FOR BULLETIN C-1.

SELLERS *Injector* CORP.
Since 1848

1631 HAMILTON STREET
PHILADELPHIA 30, PA.

▲ For more details circle **NED-8376** on enclosed inquiry slip ▲

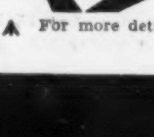
Pantography Aids Rearmament Program

THE pantograph is a versatile machine tool that does precision profiling, routing, die sinking, mold cutting, chamfering, grooving and engraving. It is credited with increasing production and securing better end results at lower cost.

Production by pantograph means high surface finish and repetitive accuracy — a dozen or thousands of identical pieces. The pantograph has high spindle speeds, up to 45,000 rpm, and uses enlarged masters that improve accuracy through a reduction ratio.

This machine is useful in machining ferrous or nonferrous metals and plastics, in regular or irregular shapes. It accommodates jobs ranging from dime size to areas of 10 by 20 feet . . . manual operation, or automatic.

JOB ILLUSTRATED: Profile 6 locking lugs for male and female sections of new 3.5" Bazooka.
MATERIAL: Aluminum alloy.
CUTTER: 5/32" dia. single flute, fast spiral H. S. steel running at 3,900 rpm, without coolant.
MASTER: 2 masters: one for male and one for female sections; 3 times oversize, traced manually.
HOLDING FIXTURE: Pneumatic-operated internal expanding type.
APPROX. TIME: 36 pieces per hour.
ALTERNATE METHODS: *None practical.*



This "Pantography" booklet tells the complete story of faster production by pantograph. Write for it and the Gorton General Catalog, 1655: The George Gorton Machine Co., 1910 Racine Street, Racine, Wisconsin.

▲ For more details circle **NED-8377** on enclosed inquiry slip ▲

New Literature—Continued

Liquid Handling Equipment
Bowser, Inc.—"1001 Ways" is title of folder which gives brief description and line drawings of line of liquid control equipment, automotive-aviation test equipment, gas-fired incinerators, builders hardware, locks, fare boxes and coin changers, filing systems and refrigerating cabinets.

▲ For more details circle **NED-8378** on enclosed inquiry slip ▲

Copper Clad Metal
American Cladmetals Co.—What is ElectroShield copper clad metal? Where can it be used? What are its physical, mechanical and electrical characteristics? In what form is it available? These questions are answered in 4-page folder No. E100.

▲ For more details circle **NED-8379** on enclosed inquiry slip ▲

Constant Delivery Pumps
Oilgear Co.—4-page bulletin 46601 illustrates and describes three constant-delivery axial piston pumps for pressures up to 3000 and 5000 psi. Units are suitable for powering cylinders for heavy-duty pushing, pulling, lifting and lowering and for maintaining high static loads.

▲ For more details circle **NED-8380** on enclosed inquiry slip ▲

Pipe Joint System
Gates Engineering Co.—Engineering manual and catalog illustrates GACO rubber-lined pipe joint system and how joints may be installed in the field. Fittings, specifications and corrosive materials to which gaskets and linings are resistant are listed.

▲ For more details circle **NED-8381** on enclosed inquiry slip ▲

Machining Coolant
F. E. Anderson Oil Co.—Lusol, an all-chemical cutting fluid, is subject of technical booklet. It also presents information on minimizing dermatitis and odor, cleaning and degreasing operations, cleaning of machines and mixing and maintenance of coolant solutions.

▲ For more details circle **NED-8382** on enclosed inquiry slip ▲

Flooring Material
United Laboratories, Inc.—How and where to apply Plastic Rock flooring plus technical data about product is information supplied in 8-page brochure No. 200. Highlighted is use of material for resurfacing areas subject to heavy foot and wheel traffic as well as other applications.

▲ For more details circle **NED-8383** on enclosed inquiry slip ▲

Incinerators
Plibrico Jointless Firebrick Co.—Complete line of incinerators erected in four standard sizes rated at 500 to 3500 lb per hour, plus four portable types rated from 135 to 450 lb per hour are covered in 16-page illustrated catalog No. 2. Special purpose incinerators are described as well.

▲ For more details circle **NED-8384** on enclosed inquiry slip ▲

Milling Fixtures
Walter W. Field & Son, Inc.—4-page bulletin No. 49 supplies brief description and illustration of Hart milling fixtures, index centers and machine vise jaws. Tabulated dimensions, prices and ordering information are included.

▲ For more details circle **NED-8385** on enclosed inquiry slip ▲

Roller & Wheel Conveyors
E. W. Buschman Co.—Illustrating complete line of portable roller and wheel conveyors, 8-page bulletin No. 15 also offers specifications, explains erection methods and how to determine conveyor requirements.

▲ For more details circle **NED-8386** on enclosed inquiry slip ▲

Pressure Sensitive Tapes
Industrial Tape Corp.—To assist purchasing agents and engineers in determining which tapes meet active government requirements, company is distributing booklet "Government Tape Specification" which classifies pressure sensitive tapes according to U. S. Government specifications.

▲ For more details circle **NED-8387** on enclosed inquiry slip ▲

Glass Blowing Equipment
Research Vacuum Supply Co.—The following types of equipment are listed in illustrated 40-page catalog 11 K: research high vacuum equipment; high vacuum pumps and oil gages; glass working machinery including hand fires, torches, blast burners, needlepoint burners and accessories; cross fires; and miscellaneous supplies for glass blowing.

▲ For more details circle **NED-8388** on enclosed inquiry slip ▲

High Pressure Regulators
Grove Regulator Co.—Powreactor Dome regulators used for controlling gas, liquids and air at pressures up to 6000 lb at temperatures up to 150° F are covered in this 16-page illustrated bulletin No. 123A-R1. Specifications, capacity tables and installation information are included for regulators which operate on balanced pressure principle.

▲ For more details circle **NED-8389** on enclosed inquiry slip ▲

a nickel a 'blow'

SHAWMUT t-d RENEWABLE LINKS COST AS LITTLE AS 5¢ TO REPLACE

Save with Shawmut t-d RENEWABLES

Both Knife-Blade and Ferrule Types for 250 and 600 volt circuits, from 0 to 600 Amps.

MAXIMUM PROTECTION WITH MAXIMUM TIME DELAY

The Shawmut "t-d" link gives both maximum time delay in the higher current ranges — and maximum protection in the overload zone. On short circuit, operation is *instantaneous* — the notches of the t-d link blow one after the other with action like a 4-step rheostat, limiting the voltage rise.

t-d FUSES & t-d LINKS

All Shawmut t-d fuses are renewable and have completely interchangeable links and parts. Knife-blade type from 70 to 600 Amps for either 250V or 600V circuits. Ferrule types from 0 to 60 Amps.

ORDER NOW OR SEND FOR SHAWMUT t-d BULLETIN 500

t-d - "Awake At The Switch"

THE **CHASE-SHAWMUT** CO.
382 MERRIMAC STREET • NEWBURYPORT, MASSACHUSETTS

▲ For more details circle **NED-8390** on enclosed inquiry slip ▲

RHOADS *Tannate*® LEATHER PACKINGS

U-VEE-CUP FLANGE

Made to your specifications by leather craftsmen with a tradition for producing fine leather products for nearly 250 years. Write for details.

PRODUCERS OF FINE LEATHER FOR 249 YEARS

J. E. RHOADS & SONS
35 NORTH SIXTH ST., PHILA. 6, PA.

▲ For more details circle **NED-8391** on enclosed inquiry slip ▲

. . . There is always *One Best Way* TO MARK ANY PRODUCT

▶ There's always a best method of marking any product or material. There's also one piece of *equipment* that is best suited to making a mark by that method on *your* particular product.

Pannier is qualified by over 50 years' experience in developing and manufacturing equipment to meet *any* marking need, to recommend specific solutions to your marking problems . . . and supply proper machines to handle your marking in the most efficient and economical manner. Just let us know your requirements.

Get full data on these Pannier *Products*

- Steel Stamps & Dies
- Rubber Stamps & Dies
- Embossing Equipment
- Stencils & Supplies
- Branding Equipment
- Code Markers
- Production Marking Machines
- Industrial Marking Inks

THE PANNIER CORPORATION
301 PANNIER BUILDING
Pittsburgh 12, Pa.

▲ For more details circle **NED-8392** on enclosed inquiry slip ▲

SAW CONCRETE AND ASPHALT

Maintenance costs slashed by sawing patches, trenches, contraction joints before breaking.

Now concrete can be sawed! By precision sawing of repair patches (traffic - damaged floors, spalled joints, etc.), tremendous savings are made. A sawed cut made ¼ the slab depth provides a perfect plane of weakness for breaking. Only perfectly smooth, straight edges remain.

On new construction, sawing contraction joints in poured slabs replaces costly hand forming and eliminates the usual spalling and high maintenance costs.

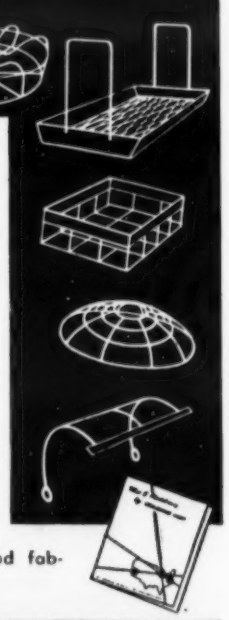
A variety of "DUSTLESS" Clipper Concrete Saw models to suit every plant need are available. While the 7½ and 13½ H.P. Models C-75 and C-130 are most popular, electrically-powered models are available for sawing in confined space.

The manufacturer need only to know the type of concrete aggregate or asphaltic concrete for proper selection of Clipper Metal Bonded Diamond Blades to accomplish the cutting.

Illustrated data available from **Clipper Manufacturing Company,** Room 401, 2800 N. Warwick, Kansas City 8, Mo. (Advt.)

▲ For more details circle **NED-8393** on enclosed inquiry slip ▲

wire fabrications



● Dishwasher racks, materials handling baskets, guards, and a wide range of specially designed and engineered wire fabrications can be furnished to meet individual requirements.

Fabrications can be coated with various types of plastics or rubbers to protect materials or parts making contact, and uncoated shapes can be supplied with nickel, cadmium or zinc plated, parkerized, bonderized or copper finish.

Coleman-Pettersen is prepared to fabricate shapes from wire up to ⅜-inch in diameter, wire mesh, expanded metal, sheet metal or any combination of these materials.

Write today for bulletin illustrating shapes that have been engineered and fabricated for specific applications.

281-COP

Wire and Metal Manufacturing by

COLEMAN-PETTERSEN CORP.

2138 ST. CLAIR AVE., CLEVELAND 14, OHIO • 2054E. 38th ST., LOS ANGELES 58, CALIF.

▲ For more details circle **NED-8394** on enclosed inquiry slip ▲

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Write on your business letterhead, today.

SOCKET UNBRAKO® SCREWS

"STANDARD" RECOMMENDS *STANDARDS*

SPS STANDARD PRESSED STEEL CO.

JENKINTOWN 24, PENNSYLVANIA

▲ For more details circle **NED-8395** on enclosed inquiry slip ▲

New Literature—Continued

Speed Reducers

Cleveland Worm & Gear Co.—6-page booklet entitled "Finest in Worm-Gear Drives" describes and illustrates line of worm-gear speed reducers and drives. Type CU unit for cooling tower service and Speedaire fan-cooled reducer are among those shown.

▲ For more details circle **NED-8396** on enclosed inquiry slip ▲

Copper Wire Weights

Rome Cable Corp.—To assist in reporting requirements and past usage of wire and cable in terms of copper poundage, bulletin "Copper Weights of Electrical Wires and Cables" lists pounds of copper per 1000 ft for most common sizes and types.

▲ For more details circle **NED-8397** on enclosed inquiry slip ▲

Paint Mixers, Stamping Machines

Arlington Corp.—20-page brochure explains facilities and services of plant which manufactures paint mixers, serving trays, special machines and parts. Stamping and plating facilities are also covered.

▲ For more details circle **NED-8398** on enclosed inquiry slip ▲

Facts on Atlanta, Ga.

Atlanta Chamber of Commerce, Industrial Bureau—"Facts and Figures About Atlanta" is title of 40-page illustrated pocket-size booklet which provides considerable amount of pertinent data on this Southern city as an ideal location for industries.

▲ For more details circle **NED-8399** on enclosed inquiry slip ▲

Industrial Floor Engineering

Flash-Stone Co.—12-page illustrated catalog "Why Engineer an Industrial Floor?" describes how industrial floors can be laid to withstand moving and deadweight loads, shock and vibration, temperature extremes, oil and greases, chemical and industrial wastes. Advantages of planned engineering are pointed out.

▲ For more details circle **NED-8400** on enclosed inquiry slip ▲

Electrical Connectors

Albert & J. M. Anderson Mfg. Co.—This 8-page illustrated catalog 49B contains application and installation data and specifications for Eitherend electrical connectors. Made with each tubular half connector identically formed, any two-half connectors can be connected within respective sizes available.

▲ For more details circle **NED-8401** on enclosed inquiry slip ▲

Plastic Containers

American Agile Corp., Plastics Div.—Rigid bottles, jars and safety jugs for storage and transportation of corrosive chemicals are described in this 8-page engineering data folder on polyethylene plastic containers. Capacity, weight, and chemical resistance of containers are listed.

▲ For more details circle **NED-8402** on enclosed inquiry slip ▲

Spring-Retainer Ball Bearing

New Hampshire Ball Bearings, Inc.—Micro spring-retainer ball bearing, now made with 3/32-in. bore x 5/16-in. OD x 7/64-in. wide, in tolerances ABEC 5 and higher is described in 12-page illustrated technical bulletin No. 50. Bearings have low and uniform values of starting and breakaway torque.

▲ For more details circle **NED-8403** on enclosed inquiry slip ▲

Glass Block Installation

American Structural Products Co.—Installations of Insulux glass block in various industrial plants plus architectural details and installation data are shown in 16-page illustrated booklet IB88. Glass block resists steam, corrosive vapors and high humidity.

▲ For more details circle **NED-8404** on enclosed inquiry slip ▲

Twist Drills

DoALL Co.—12-page catalog No. 51-816 contains information on taper shank drills (including regular and larger and smaller than regular shanks), various types of straight shanks, three and four-fluted drills, drill sets, chatter-free countersinks, drill-countersinks and carbide-tipped masonry drills.

▲ For more details circle **NED-8405** on enclosed inquiry slip ▲

Automatic Marking Equipment

Industrial Marking Equipment Co.—20-page illustrated brochure "Marking Equipment Engineered for Industry" presents features, applications and specifications for carton marking equipment, automatic case numbers, hand presses and roll markers. Type specimens and prices are included.

▲ For more details circle **NED-8406** on enclosed inquiry slip ▲

Vibrating Feeders & Conveyors

Jeffrey Mfg. Co.—Capable of handling wide variety of materials in various capacities, sizes and densities are Jeffrey-Traylor electric vibrating feeders and conveyors, covered in 84-page illustrated catalog 830. Specifications, applications, operating principles and control equipment are included.

▲ For more details circle **NED-8407** on enclosed inquiry slip ▲

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If it can ride on air, the best, most economical route for your materials—to box car, bin or production destination—is via light, durable and non-collapsible Spiratube. Its flexible, unobstructed passages convey maximum pay-load around corners, up and down, to hard-to-get-at places—and with minimum power-demand. Portable—it ideally fits into present systems. Sold through well-stocked distributors—Coast-to-Coast. Tried and approved by leading firms throughout the world.

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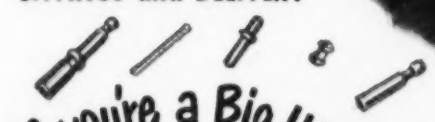

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Sound like exaggeration? Not when you know the electronic tube industry looks to The Bead Chain Mfg. Co. for its millions of radio tube pins. Or, that builders of electrical apparatus turn to us for the contact pins, terminals, jacks and sleeves required in tremendous quantities.

PARTS FOR MANY MECHANICAL USES, TOO

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Get Catalog and Cost Comparison. Send blueprint or sample and quantity requirements. Or write for Catalog-Data folder. The Bead Chain Mfg. Co., 16 Mountain Grove St., Bridgeport, Conn.

Let BEAD CHAIN make it by

MULTI-SWAGE METHOD

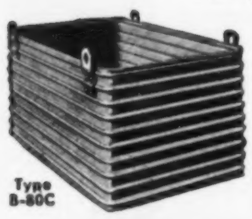
▲ For more details circle **NED-8409** on enclosed inquiry slip ▲

TRUSCON STEEL BOXES *fill the bill...*

Type PB-120

✓ for strength
✓ for durability
✓ for efficiency
in all your materials-handling jobs!

Truscon Steel Boxes and Steel Skids are the result of many years of experience in engineering and manufacturing this type of plant equipment.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We have developed many different types of steel boxes and skids, to meet every type of materials handling problem. This has resulted in features of design and construction that result in unusually efficient performance.

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Subsidiary of Republic Steel Corporation

TRUSCON STEEL BOXES AND SKID PLATFORMS

▲ For more details circle **NED-8411** on enclosed inquiry slip ▲

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LAY IT *and* FORGET IT!

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☐ Have representative make floor survey
*Name*________
*Company*________
*Address*________
*City*____ *Zone*____ *State*____

▲ For more details circle **NED-8412** on enclosed inquiry slip ▲

New Literature—Continued

Conveyors & Elevator

Baughman Mfg. Co.—Three illustrated data sheets offer specifications and general information on model 230 portable Hi-Speed troughed belt conveyor available in 18 to 46 ft lengths, model 175 Hi-Speed belt and bucket elevator for permanent and temporary installations and model 240 Hi-Speed portable troughed belt conveyor available in lengths from 50 to 70 ft.

▲ For more details circle **NED-8413** on enclosed inquiry slip ▲

Hydraulic Pumps & Motors

Commercial Shearing & Stamping Co.—Six mounting types, eight interchangeable shaft styles, and mounting data and dimensions for D-series single and tandem hydraulic pumps and single motors are covered in 60-page illustrated catalog H-4. High volumetric and mechanical efficiency pumps are for operation to 1500 psi.

▲ For more details circle **NED-8414** on enclosed inquiry slip ▲

Punch Presses & Shears

Kling Bros. Engineering Works—Full information needed to select proper punch press or shear to meet job requirements is presented in illustrated bulletin No. 712. Capacities and other details on universal, horizontal and vertical punches are tabulated.

▲ For more details circle **NED-8415** on enclosed inquiry slip ▲

Unit Heaters

C. A. Dunham Co.—12-page illustrated bulletin No. 1301 deals with design, construction and application of propeller fan type unit heaters. Easy-to-read tables list basic steam and hot water capacities, conversion factors for steam and hot water, dimensions, decibel ratings, typical specifications and ordering instructions.

▲ For more details circle **NED-8416** on enclosed inquiry slip ▲

Precision Snap-Action Switches

Minneapolis-Honeywell Regulator Co., Micro Switch Div.—Representative models in various classifications in line of over 5000 switches are detailed in 4-page illustrated bulletin 54 on precision snap-action switches. Types described include heavy and medium duty limit, explosion-proof, high capacity enclosed, die cast enclosed, basic and V-3 switches and actuators. Most are rated 15 amp on 125/250-v ac.

▲ For more details circle **NED-8417** on enclosed inquiry slip ▲

Roller Bearing Pillow Blocks

W. A. Jones Foundry & Machine Co.—Many pointers on construction, application and installation of Timken roller bearing equipped pillow blocks in sizes for shaft diameters from 1-15/16 to 9 in. are given in illustrated catalog No. 88. Also presented are engineering data, bearing capacities, lubrication information and dimensions.

▲ For more details circle **NED-8418** on enclosed inquiry slip ▲

Electrical Terminals

Thomas & Betts Co.—Data on new line of self-insulated Sta-Kon terminals for electronic equipment, instruments, industrial control apparatus, aircraft wiring and railway and marine service are offered in 2-page bulletin S4. Terminals are particularly suited for use in cramped quarters to prevent short circuits between adjacent terminals on closely mounted studs.

▲ For more details circle **NED-8419** on enclosed inquiry slip ▲

Refrigeration Equipment

Niagara Blower Co.—Two illustrated bulletins 118 and 119 deal with new Niagara Concentrator which provides "No-Frost" benefits to refigerated spaces for precooling, chilling, freezing and storing all types of products.

▲ For more details circle **NED-8420** on enclosed inquiry slip ▲

Flexible Shaft Drives

Elliott Mfg. Co.—In addition to showing typical successful applications of flexible shafting for power transmission, 8-page illustrated bulletin 207 discusses available core, casing, bearing and fitting components. Included are data on minimum bend, dynamic torque with varying radius of bend and other application factors.

▲ For more details circle **NED-8421** on enclosed inquiry slip ▲

Metal Cleaning Materials

Oakite Products, Inc.—"Some Good Things to Know About Metal Cleaning" is title of 44-page illustrated booklet which discusses variety of soils resulting from such metal fabricating processes as heat treating, forging, rolling, buffing, stamping, drawing, spinning, grinding and machining. Specific materials, equipment and procedures for removal of these soils are described.

▲ For more details circle **NED-8422** on enclosed inquiry slip ▲

Hydraulic Power Units

Haskel Engineering & Supply Co.—12-page illustrated bulletin No. 210 gives detailed performance, application information and recommendations for selection and installation of 312 standard and custom-built hydraulic power units and bell-mounted motor-pump units. Units are available to deliver pressures as high as 10,000 psi. Volumes range up to 100 gpm, depending upon pressure.

▲ For more details circle **NED-8423** on enclosed inquiry slip ▲

EXACT WEIGHT SCALES—one of Industry's most useful tools . . .

The applications of EXACT WEIGHT Scales in manufacturing operations are almost numberless and they increase daily. Here are but a few American Industry ordered units for and installed in the last 90 days alone—abrasive balancing hammers, spring testing, checking rods, jet buckets, counting screws, aircraft parts, fillers for oil filters, optical glass, laminations, gas mask canisters, checking pistons, carbon black, paint pigments, checking 20 MM projectiles, evaporation tests, color matching brass forgings and many others. If you want to cut costs and generally improve a product submit your problem. You will be surprised what can be accomplished by weighing with strictly industrial units fitted to your job.

EXACT WEIGHT SCALES
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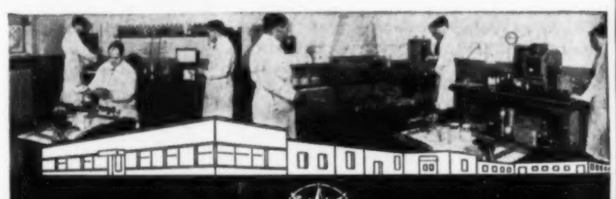

NORTHWEST CHEMICAL CO.
9310 ROSELAWN DETROIT 4, MICH.
pioneers in pH cleaning control — serving you since '32

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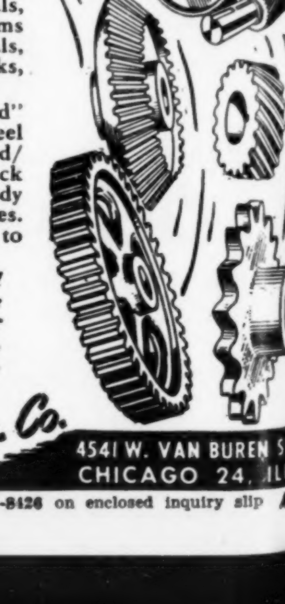
FOR LONG RUN ECONOMY "Industrial Gears"

INDUSTRIAL GEAR MFG. CO. CHICAGO — DUROCAST GEARS



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Industrial Gear Mfg. Co.
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CHICAGO 24, ILL.

▲ For more details circle **NED-8426** on enclosed inquiry slip ▲

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OFFSET
BORING HEADS
LICK PRECISION-BORING PROBLEMS!

On turret lathes as well as jig-boring and horizontal milling machines.

DEEP OR SHALLOW PRECISION-BORING with a minimum of spring or chatter. Adjustable feature eliminates need to stock various-length bars!

Modern precision-boring means EveredE Boring Heads in more and more of the nation's major plants. That's because EveredE Boring Heads provide so many proven features which increase production with less effort, time and cost.

THREE SIZES . . . provided with split type bushings . . . permit using straight type boring bars . . . afford adjustment in extended bar-lengths, giving greatest rigidity . . . while cutting with famed EveredE Triangular HSS or solid carbide tool bits.

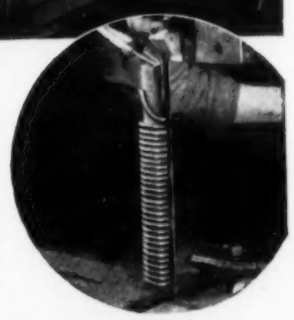
FULL DETAILS WILL SOLVE YOUR BORING PROBLEMS—SEND FOR THEM TODAY!

EVEREDE Tool Co.
2000 North Parkside Avenue Chicago 39, Illinois

For more details circle NED-8427 on enclosed inquiry slip

ELIMINATES COSTLY MILLING OPERATION ON SPLIT RINGS

ECONOMICAL DoALL BAND MACHINING DOES JOB IN 1/3 THE TIME, FREES MILLING MACHINE FOR OTHER WORK



BAND MACHINING CAN DO 100's OF JOBS FASTER, AT LOWER COST

DoALL Band Machines cut *continuously* — they slice the material part, instead of reducing it to a pile of chips. They are fast, they are versatile, they are easy to use. Here are DoALL Band Tools for every cutting, filing, grinding, finishing and polishing job.

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You can cut anything with a DoALL MP-20 Contour-matic — any material, any shape. Ask to have a *demonstration* of this versatile, time, money and material-saving machine tool right in your own plant. A DoALL sales service engineer will bring it to you, *show you* what it can do. Call your local DoALL Sales-Service Store or write:

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DoALL

INDUSTRY'S NEW TOOLS

B-1R

For more details circle NED-8428 on enclosed inquiry slip

New Literature—Continued

Electric Car Pullers

American Hoist & Derrick Co.—Complete line of capstan, drum and continuous rope type electric car pullers is featured in 8-page catalog No. 100-H-66 along with applications and specifications. One man can operate these pullers currently used at rail sidings, loading docks, piers, and in mines.

For more details circle NED-8429 on enclosed inquiry slip

Oxygen Recorder

Hays Corp.—Employed for flue gas analysis, process and product control, and safety applications, Magno-Therm oxygen recorder is described in 16-page illustrated bulletin 51-829. Gas samples are checked accurately and oxygen content indicated or recorded at any desired location.

For more details circle NED-8430 on enclosed inquiry slip

Fastening Devices

Standard Pressed Steel Co.—"Unbrako Standards" is title of booklet containing detailed information about socket head cap screws, self-locking socket set screws, socket set screw points, flat head socket cap screws, shoulder screws or stripper bolts, Dryseal-Thread pressure plugs, socket screw keys, square head set screws and precision-ground dowel pins.

For more details circle NED-8431 on enclosed inquiry slip

Floor Care & Maintenance

S. C. Johnson & Son, Inc.—"Facts About Floor Safety" is 20-page pocket-size booklet detailing recommended finishing techniques and routine maintenance methods for asphalt, rubber tile, linoleum, wood, concrete and terrazzo flooring. Tips on cleaning, polishing, touching up and refinishing are given.

For more details circle NED-8432 on enclosed inquiry slip

Abrasive Tools

Precision Supply & Machine Co.—6-page illustrated brochure No. 3 catalogs line of rotary tool accessories including felts, brushes, abrasives, mounted wheels and points. Shapes, sizes and prices are tabulated. Last page covers files and die sinker rifflers.

For more details circle NED-8433 on enclosed inquiry slip

Steam, Air & Gasoline Traps

W. H. Nicholson & Co.—32-page catalog No. 751 offers capacity tables, diagrams, and formulas describing thermostatic steam traps for pressures to 225 psi, expansion steam traps for pressures to 250 psi, weight operated traps for pressures to 1500 psi and piston-operated steam traps for pressures to 650 psi. Steam, air and gasoline separators are also covered.

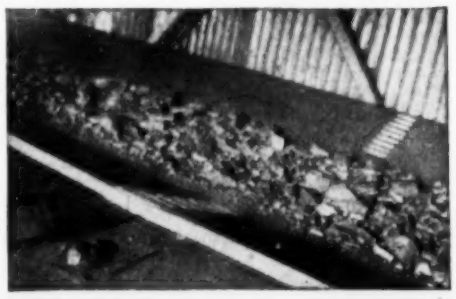
For more details circle NED-8434 on enclosed inquiry slip

Thread, Plug & Ring Gages

Republic Gage Co.—50-page illustrated catalog No. 51 is guide to selection and ordering of thread, plug, ring and pipe thread gages; thread measuring wires; cylindrical, cylindrical plug and ring gages; extra wear gages; and master setting rings. Charts and tables give data on thread standards, tolerances, dimensions and on fraction and decimal equivalents.

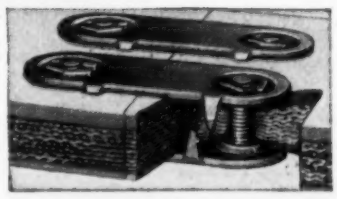
For more details circle NED-8435 on enclosed inquiry slip

FLEXCO® BELT FASTENERS and RIP PLATES



FOR HEAVY CONVEYOR AND ELEVATOR BELTS OF ANY WIDTH

★ FLEXCO Fasteners make tight butt joints of great strength and durability.
★ Trough naturally, operate smoothly through take-up pulleys.
★ Distribute strain uniformly.
★ Made of Steel, "Monel," "Everdur." Also "Promal" top plates.



Compression Grip distributes strain over whole plate area

★ FLEXCO Rip Plates are for bridging soft spots and FLEXCO Fasteners for patching or joining clean straight rips.

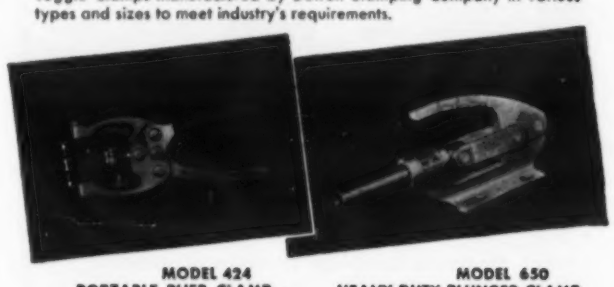
Order From Your Supply House. Ask for Bulletin F-100

FLEXIBLE STEEL LACING CO.
4664 Lexington St., Chicago 44, Ill.

For more details circle NED-8436 on enclosed inquiry slip

If you have to HOLD ANYTHING in your production operations

Hold EVERYTHING with "DE-STA-CO" Toggle Clamps in welding, riveting, bonding, machining and assembly. • Fast clamping, positive holding pressures, instantaneous release—Toggle Clamps speed up your operations and cut your costs. • There are more than 40 different Toggle Clamps manufactured by Detroit Stamping Company in various types and sizes to meet industry's requirements.



MODEL 424 PORTABLE PLIER CLAMP
For one-hand use in cramped work areas and small space. Deep jaw capacity but only 4½" in length.

MODEL 650 HEAVY DUTY PLUNGER CLAMP
For "push-pull" work-holding jobs where considerable pressure is needed. Compact; up to 4000 lbs. capacity.

MODEL 235-U RETRACTABLE CLAMP (Not illustrated)
Quick, unimpeded loading and unloading of fixtures easily possible with this one. Up to 750 lbs. pressure.

Ask for "DE-STA-CO" Toggle Clamp Catalog and name of representative nearest you who is stocking our entire line of Toggle Clamps.

DE-STA-CO DETROIT STAMPING COMPANY
360 MIDLAND AVE. • DETROIT 3, MICH.

For more details circle NED-8437 on enclosed inquiry slip

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New Hansen Tacker Feature . . .

NOT a moment is wasted reloading a Hansen Tacker. Simply hook spring over catch, insert a strip of staples, replace spring in operating position. This feature speeds reloading and prevents spring damage. Learn about other Hansen features. REQUEST BOOKLET.

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HANSEN TRADE MARK REG. U.S. PAT. OFF.

ONE-HAND Hansen TACKERS

For more details circle NED-8438 on enclosed inquiry slip

Available in Six Sizes From Your American Distributor's Stock

The *Original* Shaft-Mounted Reduction Drive That Gives You Any Speed Below 154 RPM

This standard **shaft-mounted** reduction unit installs like a sheave and is driven by belts. Here's what American Reduction Drives mean to you.

Quick, easy speed changes—No need to dismantle heavy gear equipment. You change to any speed you want simply by switching to larger or smaller standard V-belt sheaves. It's done in minutes!

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At no obligation, send me complete information on American Reduction Drives.

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COMPANY _____
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CITY _____ ( ) STATE _____

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CONTOUR MASKS

Metal, plastic, glass, ceramic, wood, rubber and other products can now be color-sprayed with Matthews snug-fitting "Contour" Spray Masks (in a few seconds) by unskilled workmen in your decorating department.

Use "Contour" Spray Masks for greater production . . . savings in costs . . . uniform, precision color-spraying.

Write Matthews today for complete information and literature, "BEHIND THE MASK". Or, send sample part, indicating color scheme.

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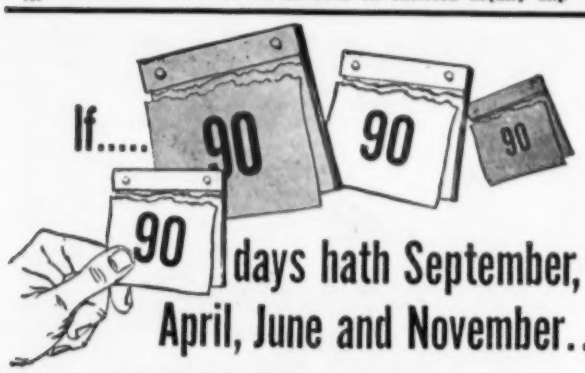

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your Royal dealer could give you 'One-month' delivery...maybe!

Why does it take so long to get delivery on Royal furniture? Here are four very good reasons...

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175 NORTH MICHIGAN AVENUE • CHICAGO 1
New York • Los Angeles • Michigan City, Ind. • Warren, Pa. • Preston and Galt, Ontario

▲ For more details circle NED-8441 on enclosed inquiry slip ▲

HEAT When and Where You Want It - - -
WATLOW CARTRIDGE UNITS

For a highly concentrated, self-contained mass of heat.

Application—For heating metal parts by insertion into drilled and reamed holes. Sealed ends available permit use for immersion purposes.

Construction—Nickel chromium resistor is wound on refractory core and embedded in high heat conductivity cement. Brass, steel, monel, or stainless steel sheaths.

Terminals—Rigid (several styles and sizes) or flexible (special lugs if desired).

Ratings—Densities 10-35 watts per sq. in.

WRITE for Watlow Electric Heating Units Catalog.

SPECIALISTS IN ELECTRIC HEATING UNITS
WATLOW
ELECTRIC MANUFACTURING COMPANY
1314 N. 23d St. St. Louis 6, Mo.

▲ For more details circle NED-8442 on enclosed inquiry slip ▲

Index to Advertisers

A

Accurate Spring Mfg. Co. .. 69
Ace Plastic Co. 17
Acme Electric Corp. 12
Acme Industries, Inc. 52
Acromark Co., The 24
Adams, R. P., Co., Inc. 5
Aerovent Fan Co., Inc. 31
Aget-Detroit Co. 17
Ahlberg Bearing Co. 68
Airetool Mfg. Co. 30
Ajusto Equipment Co. 4
Alan Wood Steel Co. 44
Allegheny Steelband Co. 2
Allen-Bradley Co. 44
Allied Radio Corp. 38
Allis-Chalmers 27, 43, 54, 76
Alter, Harry, Co., The 14
Aluminum Co. of America .. 44
Alvey Conveyor Mfg. Co. ... 18
Alvey-Ferguson Co., The ... 96
Amer. Abrasive Metals Co. .. 12
American Air Filter Co.... 23, 37
Amer. Chain & Cable Co., Inc. 6, 10, 13
Amer. Chain Div., Amer. Chain & Cable Co., Inc. .. 13
American Gas Accumulator Co. 47
American Kleer-Vu Plastics, Inc. 47
American Mat Corp. 20
American Monorail Co., The . 24
American Non-Gran Bronze Co. 55
American Optical Co. 36
American Pulley Co. 91
American Recording Chart Co. 23
American Stock Gear Div. Perfection Gear Co. 3
American Wheelabrator & Equip. Corp. 59
Ames, B. C., Co. 22
Andrews-Alderfer Processing Co., Inc. 45
Anti-Corrosive Metal Products Co., Inc. 15
Arcos Corp. 50
Armour & Co. 61
Armstrong Bros. Tool Co. .. 68
Armstrong Machine Works ... 84
Aro Equipment Corp., The .. 17
Ashworth Bros., Inc. 13
Assembly Products, Inc. 35
Associated Research, Inc. ... 78
Atlas Press Co. 79
Atomic Instrument Co. 8
Aurand Mfg. & Equip. Co. .. 11
Automatic Transportation Co., Div. of The Yale & Towne Mfg. Co. 81
Automotive Rubber Co., Inc. 74
Avery Adhesive Label Corp. . 58

B

Baker Ind. Truck Div. of The Baker-Raulang Co. .. 53
Bal, William, Corp. 56
Baldwin-Duckworth, Div. of Chain Belt Co. 76
Baldwin-Lima-Hamilton Corp. 73
Bauer & Black Div. of The Kendall Co. 82
Baughman Mfg. Co., Inc. .. 77
Bay State Abrasive Prod. Co. 41
Bead Chain Mfg. Co., The ... 89
Bear Mfg. Co. 72
Beaumont Birch Co. 16
Beaver Industries 40
Bellows Co., The 69
Beverly Shear Mfg. Co. 70
Biddle, James G., Co. 6
Bin-Dicator Co., The 51
Binks Mfg. Co. 51
Black Bros. Co., Inc., The .. 42
Black & Decker Mfg. Co....9, 96
Black Diamond Saw & Machine Works, Inc. 27
Black Drill Co., The 36
Blackburn, Jasper, Corp. 38
Blackhawk Mfg. Co. 39
Blackmer Pump Co. 6
Blaw-Knox Div. of Blaw-Knox Co. 25
Bogue Electric Mfg. Co. 84
Borg-Warner, Rockford Clutch Div. 29
Bostitch, Inc. 42
Boston Gear Works 83
Boston Woven Hose & Rubber Co. 78
Brady, W. H., Co. 26, 63
Breeze Corp., Inc. 42
Breuer Electric Mfg. Co. ... 37
Briggs & Stratton Corp. 13
Bronze Bearings, Inc. 41
Brookfield Engrng. Laboratories, Inc. 21
Brown, W. R., Corp. 55
Brown Engrng. Co. 28
Brown & Sharpe Mfg. Co. ... 34
Browning Mfg. Co. 2
Bruning, Charles, Co. 21, 81
Buell Engrng. Co. 94
Burgess-Manning Co. 14
Burke Machine Tool Co. 68
Burndy Engrng. Co., Inc. 11
Buschman, E. W., Co., Inc. 8
Bussmann Mfg. Co. 74

C

Cam Tool Co., Inc. 86
Cambridge Wire Cloth Co.... 61
Camcar Screw & Mfg. Corp. 60
Cameron Iron Works, Inc. ... 35
Carboloy, Dept. of General Electric Co. 18
Carborundum Co., The 73
Carpenter Steel Co., The ..31, 64
Carter Motor Co. 7
Carter Products Co., Inc. .. 59
Catawissa Valve & Fittings Co. 93
Celluplastic Corp. 66
Central Safety Equipment Co. 42
Chain Belt Co. 76
Challenge Machinery Co. ... 53
Champion Lamp Works 50
Champion Pneumatic Machinery Co. 31
Chase-Shawmut Co., The ... 88
Cherry Rivet Co. 85
Chicago Float Works, Inc. .. 68
Chicago Mfg. & Dist. Co. .. 33
Chicago Tool & Engrng. Co. 65
Chicago Wheel & Mfg. Co. .. 95
Chisholm-Moore Hoist Corp. . 9
Cincinnati Electrical Tool Co. 29
Cincinnati Time Recorder Co., The 5
Clarin Mfg. Co. 41
Clark Bros. Bolt Co. 30
Clark Controller Co., The .. 50
Clark Door Co. 8
Clarke Sanding Machine Co. . 69
Cleveland Cap Screw Co., The 65
Cleve. Crane & Engrng. Co., The 28, 62
Cleveland Vibrator Co., The . 38
Cleveland Worm & Gear Co., The 9
Climax Molybdenum Co. 6
Clipper Mfg. Co. 89
Coated Coil Corp., The 5
Coleman-Pettersen Corp. 89
Colonial Rubber Co. 27
Colson Corp., The 51
Columbia Electric Mfg. Co. . 47
Commander Mfg. Co. 83
Commercial Shearing & Stamping Co., The 57
Cone-Drive Gears Div., Mich. Tool Co. 60
Congress Drives 53
Continental-Diamond Fibre Co. 50
Convoy, Inc. 28
Cover, H. S. 8
Cramer, R. W., Co., Inc., The 58
Crane Co. 58
Cullen-Friestedt Co. 40
Cuno Engineering Corp. 72
Curran Corp. 63
Cushman & Denison Mfg. Co. 32
Cushman Motor Works, Inc. 94

D

Dart Union Co. 86
Davenport, A. C., & Son, Inc. 72
DeLaval Steam Turbine Co. . 18
Delta-Rockwell Power Tool Div. 78
Denison Engrng. Co., The .. 57
Detroit Elec. Furnace Div. Kuhlman Elec. Co. 40
Detroit Hoist & Machine Co. 36
Detroit Stamping Co. 91
DeWalt, Inc. 69
Dial Light Co. of America... 46
Diamond Chain Co., Inc. ... 14
Diamond Machine Tool Co. .. 37
Diamonds & Tools, Inc. 94
Dietzgen, Eugene, Co. 67
Dillon, W. C., & Co., Inc. .. 70
Disston, Henry, & Sons, Inc. 77
Distillation Products Ind. .. 75
Dixon Valve & Coupling Co. . 66
DoAll Co., The 91
Downs Crane & Hoist Co. ... 60
Dresser Mfg. Div. Dresser Industries, Inc. 43
Driv-Lok Pin Co. 33
Duff-Norton Mfg. Co., The . 3
du Mont Corp., The 49
Dunbar Glass Corp. 78
Dunham, C. A., Co. 24, 69
Durakool, Inc. 23

E

East Chicago Machine Tool Corp. 32
Eastern Industries, Inc. 94
Eastman Kodak Co. ..17, 47, 79
Edmont Mfg. Co. 38
Elastic Stop Nut Corp. of America 72
Electric Controller & Mfg. Co. 39
Electro-Therm Inc. 83
Elwell-Parker Electric Co. ... 56
Enterprise Machine Parts Corp., The 48
Essex Wire Corp. 31, 63
Eutectic Welding Alloys Corp. 4
Everede Tool Co. 91
Exact Weight Scale Co. 90
Ex-Cell-O Corp. 54
Executone, Inc. 29

F

Fafnir Bearing Co., The 31
Farrelloy Co. 96
Farval Corp., The 9
Fauver, J. N., Co., Inc. 10
Federal Press Co. 45
Federal Products Corp. 19
Fenwal, Inc. 30
Fidelity Chemical Products Corp. 64
Field, Walter W., & Son Inc. 5
Flash Box Opener Co., Inc. 64
Flash-Stone Co., Inc. 14
Flexible Steel Lacing Co. 12, 32, 83, 91
Flexible Tubing Corp. 89
Flexrock Co. 11, 96
Foley Mfg. Co. 56
Food Machinery & Chemical Corp. 61
Foote Bros. Gear & Machine Corp. 35
Foxboro Co., The 5
Fuller Co. 73
Fuller Brush Co., The 71

G

Galland-Henning Mfg. Co. ... 48
Gast Mfg. Corp. 54
Gebauer Chemical Co., The . 49
General Box Co. 13
General Electric Co. 18, 22, 25, 43, 62
General Plate, Div. Metals & Controls Corp. 55
General Radio Co. 53
General Scientific Equipment Co. 9
General Tire & Rubber Co. . 61
Georgia-Pacific Plywood Co. . 86
Gerotor May Corp 77
Gerrard Steel Strapping Co. . 95
Globe Hoist Co. 20
Goggle Parts Co., The 23
Goodrich, B. F., Co., The .. 71
Gorton, George, Machine Co. 88
Graymills Corp. 9
Greene, Tweed & Co. 4
Greenlee Tool Co. 48
Gries Reproducer Corp. 15
Grinnell Co., Inc. 72
Grip Nut Co. 76
Guardian Electric 86

H

Haas Miller Corp. 42
Hamilton Tool Co., The 70
Hammond Machinery Builders, Inc. 43
Hanchett Magna-Lock Corp. . 19
Handy & Harman 42
Hannifin Corp. 30, 51, 68
Hansen, A. L., Mfg. Co. ... 91
Harnischfeger Corp. 65
Harper, H. M., Co., The 59
Harrington Co., The 81
Hartzell Propeller Fan Co. . 46
Haskins, R. G., Co. 14
Haslett Chute & Conveyor Co. 83
Haynes Stellite Co., A Div. of Union Carbide & Carbon Corp. 75
Hays Corp., The 95
Hein-Werner Corp. 74
Hetherington & Berner Inc. . 88
Hewitt-Robins, Inc. 84
Hill Acme Co., The 36
Homer Mfg. Co., Inc., The .. 10
Homestead Valve Mfg. Co. .. 85
Honan-Crane Corp. 48, 49
Hoover Ball & Bearing Co. .. 40
Houghton, E. F., & Co. 87
Hunt, Rodney, Machine Co..30, 71
Hydroway Scales, Inc. 35

I

I-T-E Circuit Breaker Co. ... 65
Ideal Industries, Inc. 3
Ideal Stencil Machine Co. .. 62
Illinois Testing Laboratories, Inc. 39
Industrial Engrng. Equipment Co. 24
Ind. Engrng. & Mfg. Co., Inc. 22
Industrial Gear Mfg. Co. 90
Industrial Products Co. 26, 59
Industrial Tape Corp. 84
Ingersoll-Rand 36
International Staple & Machine Co. 45
Invincible Vacuum Cleaner Mfg. Co. 52
Ironbound Box & Lumber Co. 33
Island Equipment Corp. 45

J

Jabsco Pump Co. 62
Jefferson Electric Co. 75
Jeffrey Mfg. Co., The 7
Jelliff, C. O., Mfg. Corp., The 84
Johnson Bronze 59
Johnson Mfg. Corp. 64
Johnson Plastic Corp. 3
Jones, C. Walker, Co. 72
Jones, Howard B. Div., Cinch Mfg. Corp. 36

K

Kalamazoo Tank & Silo Co., Machine Tool Div. 67
Kenco, Inc. 85
Kendall Co., The, Bauer & Black Div. 82
Kester Solder Co. 70
Key Co. 45
Kold-Hold Mfg. Co. 96
Krieg, Victor J., Inc. 95
Kuhlman Elec. Co., Det. Elec. Furnace Div. 40

L

Lamson & Sessions Co., The . 47
Lapeer Mfg. Co. 6
Leiman Bros., Inc. 26
Leslie Welding Co. 46
Lewis Machine Co. 57
Libbey • Owens • Ford Glass Co. 45
Lift Trucks, Inc. 55
Linde Air Products Co., A Div. of Union Carbide & Carbon Corp. 13
Link-Belt Co. 27, 35, 43
Link Industries 39
Littell, F. J., Machine Co. . 79
Logan Co. 4
Louisville Metal Prod. Co. ... 34
Lovejoy Flexible Coupling Co. 12
Lyon-Raymond Corp. (see Raymond Corp.) 85

Mc

McCord Corp. 44

M

M-B Products 65
Maas & Waldstein Co. 66
Maguire, Walter, Co., Inc. .. 90
Manco Mfg. Co. 46
Manheim Mfg. & Belting Co. 74
Mfgrs. Equipment Co., The . 64
Markal Co. 94
Markem Machine Co. 54
Marsh Stencil Machine Co. .. 19
Mason-Neilan Regulator Co. . 26
Master Mfg. Co. 3
Mateer, G. Diehl, & Co. 79
Mathews Conveyer Co. 48, 49
Matthews, Jas. H., & Co. .. 92
Maurey Mfg. Corp. 30
Mead Specialties Co. 25, 58
Medallion Mfg. Co. 77
Merrill Bros. 48
Metals & Controls Corp. ..55, 82
Metzgar Co. 41
Meyers, W. F., Co., Inc. ... 43
Michigan Tool Co. 60
Midland Industrial Finishes . 45
Milton Roy Co. 82
Minneapolis - Honeywell Regulator Co. 28, 63
Mitts & Merrill 57
Modern Machine Tool Co. ... 22
Monarch Rubber Co., The ... 34
Monroe Co., Inc., The 7
Morse Mfg. Co., Inc. 52
Mortell, J. W., Co. 96
Motch & Merryweather Machinery Co., The 87
Moto-Truc Co., The 58
Mueller, L. J., Furnace Co. . 62
Mueller Brass Co. 50
Multistamp Co., Inc., The .. 8
Mystic Adhesive Products ... 73

N

Nagle Pumps, Inc. 17
National Bearing Div. Amer. Brake Shoe Co. 28
National Dryer Sales Corp. .. 69
National Screw & Mfg. Co. . 37
National Tool Co. 66
Nelson, Herman, Div. Amer. Air Filter Co., Inc. . 23
New Hermes, Inc. 41
New Jersey Machine Corp. ... 78
New York Blower Co., The .. 80
Newaygo Engrng. Co. 49
Nicholson, W. H., & Co. 51
Nicholson File Co. 55
Nolan Co., The 95
Nord International Corp. 11
Northern Engrng. Works ... 18
Northwest Chemical Co. 90
Norton Co. 39
Nox-Rust Chemical Corp. ... 95
Nu-Matic Grinders, Inc. 22

O

Ohio Brass Co. 73
Ohio Gear Co., The 54
Ohio Knife Co. 57
Olson, Samuel, Mfg. Co., Inc. 71
O'Neil-Irwin Mfg. Co. 38
Open Steel Flooring Institute, Inc. 67
Orr & Sembower, Inc. 52
Ortman-Miller Machine Co. .. 52
Osborn Mfg. Co., Inc. 40
Osborn Mfg. Co., The 20
Oster Mfg. Co., The 29

P

Pabco Products, Inc. 53
Paddock Tool Co. 40
Page Steel & Wire Div. Amer. Chain & Cable Co., Inc. ... 6
Palley Supply Co. 33
Palnut Co., The 35
Paltier Corp., The 6
Pangborn Corp. 22, 23, 62
Pannier Corp., The 88
Patterson-Kelley Co., Inc. ... 2
Peck & Harvey 42
Peerless Electric Co. 83
Peerless Pump Div., Food Machinery & Chemical Corp. 61
Penn Metal Corp. of Penna. . 76
Pereny Equipment Co. 16
Perfection Gear Co. 2
Philadelphia Gear Works, Inc. 15
Phillips Mfg. Co. 56
Pike, E. W., & Co. 21
Pine, William S. 93
Pines Engineering Co., Inc. . 67
Pioneer Patents & Products Co. 16
Pioneer Rubber Co., The ... 79
Pittsburgh Plate Glass Co. .. 56
Pneu-Trol Devices, Inc. 17
Porter-Cable Machine Co. .. 24
Powell Pressed Steel Co., The 46
Powers Regulator Co., The .. 31
Precise Products Co. 58
Prime-Mover Co., The 69
Production Instrument Co. .. 32
Progressive Mfg. Co., The .. 63
Proto Tools 78
Pulverizing Machinery Co. .. 66
Pyle-National Co., The 15

Q

Quincy Compressor Co. 67

R

R. C. S. Tool Sales Corp. .. 16
Rapids-Standard Co., Inc. ... 15
Raymond Corp. 85
Reeves Brothers, Inc. 82
Reliance Electric & Engrng. Co. 81
Republic Rubber Div. Lee Rubber & Tire Corp. . 16
Research Products Corp. ... 16
Reuland Electric Co. 27
Revolvator Co. 83
Rhoads, J. E., & Sons 88
Rhodes, M. H., Inc. 49
Richards, J. A., Co. 82
Ridge Tool Co., The 56
Rivett Lathe & Grinder, Inc. 61
Robbins, Omer E., Co. 11
Robbins & Myers, Inc. 16, 85
Roberts, Weldon, Rubber Co. 81
Rockford Clutch Div. Borg-Warner 28
Rock-Tred Corp. 93
Rockwell Mfg. Co. 78
Rockwood Sprinkler Co. ...6, 80
Rodgers Hydraulic, Inc. 42
Roper, Geo. D., Corp. 39
Roseman Mower Corp. 12
Rotor Tool Co., The 37
Rowe Machinery & Mfg. Co... 2
Royal Metal Mfg. Co. 91
Ruby Chemical Co. 77
Russell & Stoll Co., Inc. ... 23
Rynel Corp. 19

S

Sabin Machine Co., The 44
Sarco Co., Inc. 68
Schramm, Inc. 86
Sellers Injector Corp. 88
Service Caster & Truck Corp. 28
Service Machine Co., Inc. ... 72
Shafer Bearing Corp. 4
Shakeproof, Inc. 66
Sheldon Machine Co., Inc. .. 12
Shenango-Penn Mold Co. 33
Shredmaster Corp., The 61
Sier-Bath Gear & Pump Co... 71
Simonds Machine Co., Inc. .. 76
Simplicity Engrng. Co. 25
Sly, W. W., Mfg. Co., The .. 20
Smooth-On Mfg. Co. 24
Sommer Metalcraft Corp. ... 28
South Bend Lathe Works 21
Speedway Mfg. Co. 75
Spencer Thermostat Div. Metals & Controls Corp. .. 82
Spencer Turbine Co., The ... 21
Spo Milwaukee, Foundry Equip. Div. 31
Spray Engineering Co. 76
Spraying Systems Co. 14
Stackbin Corp. 46
Standard Conveyor Co. 20
Standard Pressed Steel Co. 78, 81, 89
Stanley Tools 34
Stanley Works, The 51
Sta-Warm Electric Co. 38
Stearns Magnetic, Inc. 96
Stephens-Adamson Mfg. Co. 8, 9, 59
Sterling Electric Motors 63
Stevens, Frederic B., Inc. ... 65
Sticht, Herman H., Co., Inc. 67
Stonhard Co. 95
Stow Mfg. Co. 10
Streator Dependable Mfg. Co. 2
Streeter-Amet Co. 80
Sturdy Broaching Service ... 19
Sturtevant, P. A., Co. 12
Sturtevant Mill Co. 7
Sullivan Becker Co. 13
Superior Tube Co. 29
Surety Rubber Co., The 55
Surface Combustion Corp. ... 40
Sutton Mfg. Co. 85
Synthane Corp. 41
Syntron Co. 26, 47, 60, 71

T

Taber Instrument Corp. 11
Taylor Fibre Co. 82
Tempil Corp. 87
Templeton, Kenly & Co. 81
Thermo Electric Co., Inc. .. 41
Thomas Associates 5
Thomas & Betts Co., The ... 20
Thomas Truck & Caster Co. 36
Thompson Electric Co., The . 11
Tilden Tool Mfg. Co. 84
Tinnerman Products, Inc. ... 32
Titeflex, Inc. 34
Tokheim Oil Tank & Pump Co. 21
Toledo Pipe Threading Machine Co. 76
Toledo Scale Co. 10
Tomkins-Johnson Co., The .. 46
Tote System, Inc. 87
Towmotor Corp. 73
Trabon Engineering Corp. ... 23
Transail, Inc. 4
Trumbull Electric Dept. of General Electric Co. 22
Truscon Steel Co. 90
Tubing Appliance Co. 37
Turner Uni-Drive Co. 32

U

Union Carbide & Carbon Corp., Haynes Stellite Co. . 75
Union Carbide & Carbon Corp. Linde Air Products Co. .. 13
Union Metal Mfg. Co., The.45, 49
United Laboratories, Inc. ... 5
U. S. Electrical Motors, Inc. 13
United States Gasket Co. 7
United States Steel Co. 93
U. S. Stoneware Co. 25, 80
Universal Engrng. Co. 19
Universal Metal Hose Co. ... 28

Advertisers Index—Continued

V

V & E Mfg. Co. 70
Valvair Corp. 2
Varflex Sales Co., Inc. 26
Veeder-Root, Inc. 75
Viking Shear Co. 33

W

Ward Leonard Electric Co. .. 44
Watlow Electric Mfg. Co. ... 92
Wayne Pump Co., The 87
Webb, Jervis B., Co. 7
Wedge-Wire Corp. 2
Welding & Assembly Positioning Equip. Div. Worthington Pump & Machinery Corp. 80
Wells Mfg. Corp. 80
West Bend Equipment Corp. . 66
Western Lithograph Co. 70
Westinghouse Air Brake Co. 53
Weston Electrical Instrument Corp. 32
Wheeler Insulated Wire Co... 87
Wheeler Reflector Co. 74
Whistler, S. B., & Sons, Inc. 5
Whitney Chain Co. 7
Wiegand, Edwin L., Co. ...4, 57
Willson Products, Inc. 25
Wilshire Power Sweeper Co. . 18
Wilson's, William M., Sons, Inc. 75
Winnen Incinerator Co. 94
Worthington Pump & Machinery Corp. 18, 80
Wright Hoist Div., Amer. Chain & Cable 10

Y

Yale & Towne Mfg. Co., The 19
Yarnall-Waring Co. 34, 77

Index to Products

A

Abrasive Products 39, 41, 61, 81, 91, 95
Adhesives 28, 77, 78, 87
Air Conditioning 52
Air Pads 51
Alloys, Special-Purpose 50, 75, 85, 94

B

Balancing Machines 72
Balls 13, 17, 40
Bases, Traversing 3
Bearings 4, 8, 28, 31, 41, 53, 59, 68, 75, 76, 77, 89, 90
Bellows 42
Belt Fasteners 12, 32, 83, 91
Belting 16, 30, 53, 66, 74
Belts, Conveyor 13, 61, 78
Bender 67, 82
Binder, Load 44
Bins & Boxes, Parts 46
Boxes & Crates, Wooden 13
Boxes, Shop 28, 31, 48
Brazing Materials 42, 75
Broaching Equipment 49
Brooms 71
Bronze 28
Brushes, Wire Wheel.....20, 50
Bulletin Boards.....59, 72
Burners, Gas 40
Bushings, Drill 10

C

Cameras, High Speed 17
Car Door Opener 95
Car Spotter 91
Casters 61
Castings 55
Castings, Centrifugal 33, 55
Chains 7
Chains, Roller 14
Chairs 41, 92
Chucks, Magnetic 19
Clamping Devices ..1, 6, 12, 74, 91
Clamps, Lifting 48, 60, 62
Clarifier, Coolant 48, 49
Cleaners, Air 5
Cleaners, Vacuum 3, 21, 37, 43, 69
Cleaning Equipment, Blast.20, 22
Cleaning Machines 85, 88
Cleaning Machines, Parts.... 9, 13, 56
Cleaning Materials 63, 80, 90
Clutches 29, 31, 71
Coatings, Protective 64, 79, 80
Communications Equipment .. 15, 29, 87
Compressors, Air.....31, 67, 86
Condensation Preventive 96
Controls, Air & Hydraulic ..2, 3, 12, 17, 30, 33, 53
Controls, Bin Level 51
Controls, Electric 7, 16, 19, 20, 22, 39, 42, 44, 47, 50, 53, 54, 56, 65, 76, 87, 90
Controls, Level 34, 51
Controls, Temperature & Pressure 9, 26, 28, 30, 31, 39, 82, 88
Conveyor Accessories.4, 28, 45, 59
Conveyors 4, 7, 8, 12, 15, 17, 18, 20, 22, 41, 45, 48, 49, 73, 77, 83, 88, 90
Corrosion Preventive 42, 80, 83, 95
Counting Devices....8, 32, 75, 80
Couplings, Flexible 12, 43, 71, 76, 83
Cradles, Coil 29
Cranes.....18, 24, 85, 86
Crushers 7, 49
Cutter, Metal 82
Cutoff Machines 29
Cylinders, Air & Hydraulic ...33, 46, 48, 52, 57, 61, 85, 87

D

Deburring Equipment 58
Dehumidifiers 14
Die Accessories 42
Die Castings 15
Dies, Adjustable 3
Door Operator 8, 44
Doors, Industrial 8
Drafting Equipment ...67, 70, 81
Drill Chip Breaker 83
Drilling Attachment, Deep Hole 83
Drilling Machines 1, 29, 36
Drills 33, 39, 61
Drills, Masonry 18, 25, 84
Drives, Chart 23
Drives, Variable Speed 15, 27, 52, 63, 91
Drying Equipment 44, 55
Duplicating, Dieless 38
Dust Collectors 7, 17, 22, 23, 59, 60, 94

E

Electronic Equipment...38, 39, 61
Elevating Equipment 20, 66, 70, 85
Engines, Gasoline 13, 94
Engraving Machines 41, 88
Envelopes, Plastic 37, 47

F

Fabrics 45, 79, 82
Fans & Blowers.31, 37, 46, 64, 85
Fastening Devices...4, 15, 27, 30, 32, 33, 35, 37, 40, 46, 47, 59, 60, 65, 66, 69, 72, 76, 81, 85, 89, 91
Feeders, Parts.....49, 69, 71, 79
Feeders, Vibratory 60
Fencing 6
Files 55
Filtering Equipment 5, 9, 23, 37, 53, 54, 63, 72, 82, 87
Finishes.....44, 45, 66, 76, 84, 94
Finishing Equipment, Blast.22, 72
Finishing Equipment, Spray..3, 5, 13, 16, 29, 31, 35, 51, 62, 74, 90
Fire Extinguishing Equipment 6, 73
Flexible Shaft Machines.10, 14, 90
Floats 68
Floor Machines.....18, 37, 69
Flooring Materials 7, 8, 12, 14, 24, 25, 53, 67, 77, 78, 80, 87, 88, 89, 90, 91, 93, 95, 96
Foundry Equipment 58
Furnaces, Industrial 19, 40
Fuses 74, 88

G

Gages, Precision 11, 13, 19, 22, 38, 45, 91
Gearing.....3, 19, 54, 60, 90
Generators, Steam 52
Glass Products 45, 78
Gloves, Industrial...18, 38, 55, 72
Gloves, Neoprene 79
Goggles 8, 25, 36
Grinders, Tool & Cutter 6, 27, 45, 62
Grinding Accessories 22, 54, 73, 86, 94
Grinding machines.....24, 32, 43

H

Heat Exchangers 96
Heat Treating Equipment ... 1
Heaters, Compound 16, 38, 86
Heaters, Electric....4, 57, 83, 92
Heaters Electronic.....27, 57, 95
Heaters, Unit ...23, 44, 62, 72, 80, 84, 89, 90
Heaters, Water 87
Help Wanted 96
Hoists.....10, 18, 38, 44, 81
Holloware, Fiber 50, 56
Hose & Fittings 38, 66, 84
Humidifying Equipment 84

I

Incinerator 28, 88, 94
Indicators, Pressure & Temperature 87, 96
Inspection Equipment 21, 34, 43, 64, 65, 66, 75, 79, 86
Instruments, Electric 35
Insulation, Electric 7, 26, 75, 80, 82, 83
Insulation, Thermal 81, 85

J

Jacks 74, 81
Jacks, Leveling 48
Jigs & Fixtures 5, 21, 26
Joints, Rotating 17, 71

K

Knives & Blades 57

L

Labels 10, 26, 58, 70, 82
Laboratory Equipment 17, 63
Ladders 34, 87
Laminated Materials 30, 44, 55, 88
Lighting Equipment ..1, 15, 23, 27, 39, 50, 74, 85
Lights, Pilot 46
Lockers & Shelving 76
Lubricants 33, 41, 87, 88, 94
Lubricating Equipment 9, 10, 18, 23, 40

M

Machine Tools 6, 12, 21, 51, 59, 68, 72, 79, 94
Machine Tool Accessories ...3, 5, 11, 19, 22, 24, 39, 58, 65, 88, 91
Magnetic Equipment 10, 96
Marking Equipment 8, 19, 24, 25, 26, 32, 54, 70, 88, 89, 94
Masks 63, 73, 82, 86, 92
Materials Handling Equipment 2, 6, 7, 9, 10, 16, 25, 33, 46, 48, 49, 50, 51, 52, 56, 57, 60, 62, 66, 71, 83, 87, 90, 95
Materials, Handling Overhead 7, 24
Mats, Floor 20
Meters, Flow 5, 30, 95
Meters, Tong Test 47
Mixing Equipment 2, 42, 52
Molybdenum Alloys 6
Motors, Air 54
Motors, Electric 1, 27, 48, 64, 81, 83
Mowing Machines 12

N

Nozzles, Spray 14, 76

O

Office Equipment 70, 86
Opener, Box 64
Ovens, Industrial 15, 26, 87

P

Packaging Equipment 36, 70, 73, 89
Packaging Materials 66, 78, 79, 80
Packings & Gaskets 4, 46, 82, 88, 94
Pads, Cutting 27
Parts, Precision 63, 77, 89
Pipe & Fittings 3, 43, 86, 88, 93, 95
Pipe Joint Compound 45
Pipe Tools & Machines 29, 56, 68, 76
Plastics 41, 81, 82, 83, 87
Plating Equipment 25, 65
Plywood 86
Power Units, Electric ...7, 16, 38
Power Units, Hydraulic 33, 46, 53, 90, 93
Presses 10, 11, 25, 28, 37, 38, 40, 43, 45, 46, 51, 57, 67, 68, 72, 74, 90
Prizes 85
Process Equipment 88
Pullers 9, 24, 74
Pulleys & Sheaves 2, 18, 30, 38, 53
Pulverizers 62
Pumps 6, 9, 16, 17, 18, 21, 26, 34, 36, 39, 43, 61, 62, 75, 77, 82, 85, 88, 90, 93, 94
Pumps, Vacuum ...26, 64, 69, 78
Punches 39, 46, 48, 72
Pyrometers 41

R

Racks 28
Rectifiers 38, 84
Reels, Cord 56
Reels, Hose 4, 15, 87
Refrigeration Equipment 14, 52, 90
Regulators, Voltage 62
Relays 47, 48, 57, 67, 86
Reproduction Equipment 1, 14, 21, 42, 47, 69, 75
Resistors 43, 44
Respirators 23, 40
Rolls 30, 71
Rope 79, 84
Rubber Products 74

S

Safety Equipment 49, 53, 56, 59, 82
Saw Accessories, Band 40, 59
Saw Blades 36, 43, 54, 87
Saw Sharpener 56
Saws, Masonry 89
Saws, Metal Cutting 16, 36, 64, 67, 80, 91
Saws, Wood 16, 51, 69, 78, 87, 95
Scales 2, 10, 35, 90
Scrap Processing Equipment 31, 32
Screening Equipment 2
Seals 47, 61, 78, 96
Shears 33, 36, 46, 57, 68, 70
Shop Equipment 4, 7, 22, 53, 92
Shredders 57, 61
Signals 4, 9
Slings 13
Slitting Machines 52
Soldering Equipment 26, 32, 70, 77
Speed Reducers 9, 15, 27, 35, 46, 54, 89
Spray Equipment 14, 76
Spreaders, Adhesive 42
Springs 69, 86
Sprockets 7, 14
Straighteners, Bar & Tube .. 52
Stampings 86
Stapling Equipment 32, 42, 45, 57
Steel, Tool 64
Stencil Equipment 62
Stokers 59
Strapping, Steel 2, 51, 77, 95
Strip, Metal 5, 81

T

Tacker, Hand 91
Tachometers 6, 18
Tape, Industrial 54, 82, 88
Telephone Booths, Acoustic .. 14
Testing Equipment 1, 5, 8, 11, 12, 21, 25, 37, 60, 65, 67, 70, 73, 76, 78, 91
Thermometers 32
Timing Devices ..5, 22, 23, 49, 58, 68, 74, 80
Tires, Industrial 34, 61, 71
Tools, Carbide 21, 66, 94
Tools, Cleaning 11
Tools, Hand 33, 34, 40, 79
Tools, Pneumatic 1, 17, 30, 37, 60, 65, 69
Tools, Portable Electric 1, 9, 26, 58, 75, 95, 96
Tractors, Hoist 36
Tractors, Industrial 34
Transformers 75, 76, 95
Traps, Steam 24, 51, 68, 77, 86, 87, 91
Trolleys 10, 35
Trucks, Hand 2, 8, 23, 24, 28, 36, 44, 55, 66, 78, 83
Trucks, Industrial Power 1, 19, 41, 53, 56, 58, 64, 69, 70, 73, 74, 81
Tube Fabricating Equipment 30, 52, 67
Tubing & Fittings 14, 25, 29, 31, 34, 41, 89

V

Valves..35, 45, 58, 63, 73, 80, 88
Ventilating Equipment 16, 60
Vibration Absorbers.11, 22, 24, 48
Vibrating Equipment 8, 38, 70
Vises 55, 56, 65

W

Washroom Equipment 69
Water Cooler 19
Water Treatment 67
Waterproofing Material 11
Welders, Electric 33, 65, 85
Welding Accessories..1, 4, 11, 20, 26, 35, 40, 50, 52, 80, 84, 95
Wire Cloth & Screens 84
Wire, Electric 31, 89, 96
Wire Specialties 28, 89
Wiring Accessories..5, 20, 27, 36, 37, 40, 42, 63, 86, 89, 90, 94
Wrenches 12, 37

NEW EQUIPMENT DIGEST

NBP CCA

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OCTOBER, 1951

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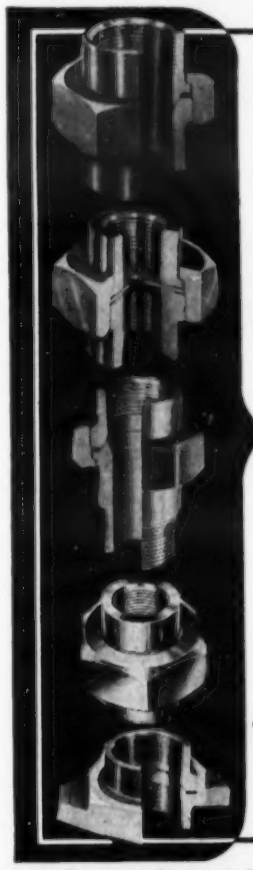

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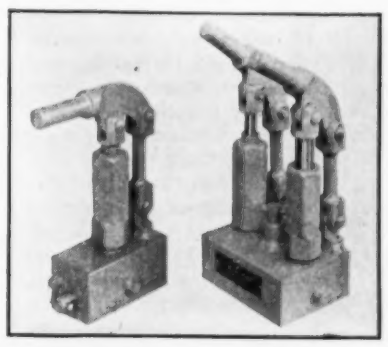

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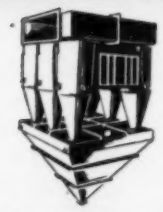
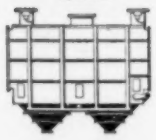


Buell (van Tongeren) Cyclone



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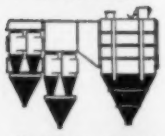

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For more details circle NED-8449 on enclosed inquiry slip

New Literature—Continued

Colloidal Solution

Monsanto Chemical Co., Merrimac Div.—Synton C-30, a colloidal solution of hydrated silica in water for emulsion type waxes, water-based finishes, textiles, latex, is subject of technical bulletin. It outlines compatibility, effect of salts, electrolytes, acids and alkalies, as well as shipment of chemical and its availability.

For more details circle NED-8450 on enclosed inquiry slip

Automatic Screw Machine

Cleveland Automatic Machine Co.—Descriptive information, specifications and speed ratings pertinent to model AB single spindle Dialmatic 2½ and 3-in. automatic screw machines is found in 6-page illustrated brochure. Machine can be converted in 30 minutes to a 6-in. chucking automatic.

For more details circle NED-8451 on enclosed inquiry slip

Cast Alloy Cutting Tools

Crobalt, Inc.—Conditions under which high speed steels, cemented carbides and cast alloy cutting tools each give best performance are specified in 4-page bulletin 101. Forms and sizes of tools available for turning, facing, milling, boring and reaming are described and illustrated.

For more details circle NED-8452 on enclosed inquiry slip

Aircraft Hydraulic Fluid

R. M. Hollingshead Corp.—The history and development of H_2, a noninflammable hydraulic fluid used in aircraft hydraulic systems is told in 16-page booklet No. 5651. Fluid's evaluation vs. operation, composition and servicing characteristics are presented, and thermal properties, specific gravity-temperatures are graphically shown.

For more details circle NED-8453 on enclosed inquiry slip

Line Support Clamps & Blocks

Thomas Associates—38-page looseleaf "1951-52 Engineering Manual" covers line of 12,000 types and sizes of bare metal and cushioned line support clamps and blocks for aircraft and industrial use. Detailed prints and specifications of materials, finishes and related items are covered. New products include silicate rubber cushioning material, multiple wiring clamps and bolt mounting clamps.

For more details circle NED-8454 on enclosed inquiry slip

Stainless Steel

Republic Steel Corp.—Answering questions of those considering change from type 302 stainless steel to type 430 due to defense restrictions on former type is this 12-page illustrated booklet. Entitled "A Guide to Type 430 Stainless Steel as Alternates of 18-8 Series," it presents drawing, forming and welding information and data on mechanical properties.

For more details circle NED-8455 on enclosed inquiry slip

Sheet Packings

Raybestos-Manhattan, Inc., Packing Div.—Complete description, illustrations and service recommendations of line of asbestos and fiber sheet packings are contained in 8-page bulletin. Included are woven asbestos wire inserted, Pyroid, Navy grade Dreadnaught, No. 670, K-68, No. 10,000 compressed asbestos sheet packings and Duroil fiber sheet.

For more details circle NED-8456 on enclosed inquiry slip

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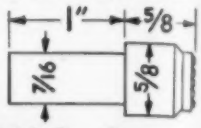

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For more details circle NED-8461 on enclosed inquiry slip

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For more details circle NED-8462 on enclosed inquiry slip

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USS **GERRARD ROUND STEEL STRAPPING**

UNITED STATES STEEL

For more details circle NED-8463 on enclosed inquiry slip

New Literature—Continued

Materials Handling Methods

"Modern Methods of Materials Handling" is title of this 248-page, 8 x 11-in. book, intended to provide a broad basic knowledge for those engaged in materials handling division of industry. Methods, types of equipment and materials described are in actual use in a variety of operations, handling many and varied products. Book, compiled by Material Handling Institute, is sectionalized. Some of sections are pertinent to aircraft, beverages, building material, foundry, metal products, oil and paint and warehousing. Price, $5.50. Published by Prentice-Hall, Inc., 70 Fifth Ave., New York 11, N. Y.

For more details circle NED-8464 on enclosed inquiry slip

Heating Equipment Transformers

General Electric Co.—8-page illustrated booklet GEA-5599 covers standardized manufacture ignition transformers for domestic type automatic oil and gas-fired heating equipment. Included are diagrams, dimensional drawings and section dealing with modifications available.

For more details circle NED-8465 on enclosed inquiry slip

Industrial Feeding Practices

Paper Cup & Container Institute—Based on a survey of 240 plants is this 40-page illustrated booklet "Feeding the Factory Worker." Current practices on methods, costs, financial arrangements, food service wages and feeding extra shifts are reported.

For more details circle NED-8466 on enclosed inquiry slip

Hard-Facing Electrodes

Alloy Rods Co.—16-page illustrated bulletin No. 5651 breaks down applications of Wear-Arc hard-facing alloys by type of industry. Properties, typical applications, welding procedure, sizes and identification of different electrodes in line are covered.

For more details circle NED-8467 on enclosed inquiry slip

Induction Heating & Melting

Ajax Electrothermic Corp.—Included in 8-page bulletin 27A "Induction Heating and Melting" is Ajax-Northrup selector chart for induction heating and melting and table giving heating melting speeds for standard induction equipment. Illustrations of typical equipment and case histories are other features.

For more details circle NED-8468 on enclosed inquiry slip

Battery Engineering Data

Gould-National Batteries, Inc.—Revised edition of battery technology handbook contains 56 pages of technical instructions and engineering data on care of motive power storage batteries. Added to illustrated booklet is section on battery charging. Theory, operation, maintenance, repair and parts data are included.

For more details circle NED-8469 on enclosed inquiry slip

Pipe Hangers, Vibration Eliminators

Blaw-Knox Co., Power Piping Div.—96-page illustrated and spiral-bound catalog No. 51 provides data on pipe hangers, vibration eliminators and supports. Detailed descriptions, dimensional drawings and specifications for wide variety of equipment offered is included, along with section on weight of piping materials.

For more details circle NED-8470 on enclosed inquiry slip

Packaging for Uncle Sam?

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Rust Prevention Division
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For more details circle NED-8471 on enclosed inquiry slip

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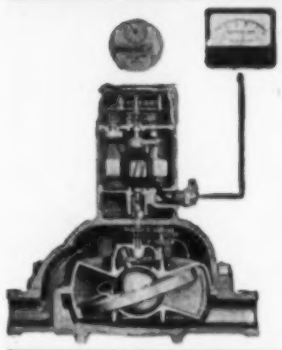

Hays VERIFLOW meter accurately measures, indicates, and totals the flow of corrosive and hard-to-meter liquids without using weigh tanks, orifice plates, or gage sticks.
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For more details circle NED-8474 on enclosed inquiry slip

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KOLD-HOLD MFG. CO.
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New Processes & Materials

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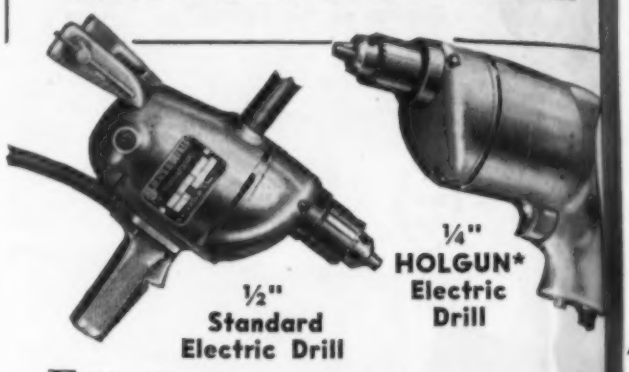

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